

# A STRATEGIC CAPABILITY REVIEW OF THE GEORGIAN ARMED FORCES

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General Studies

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

A STRATEGIC CAPABILITY REVIEW OF THE GEORGIAN ARMED FORCES, by Major David Usenashvili, 138 pages.

The National Security Strategy of Georgia describes the possibility of a large-scale military intervention into its territory as one of the major threats to the security of Georgia. The political goals of an aggressor, who may challenge the sovereignty of Georgia, are not the focus of this thesis. However, this work suggests that strategically the enemy will require legitimization of its actions to its own populace and the international community. For Georgia diplomacy is the preferred means of resolution of this potential crisis. National leadership is responsible to seek those solutions at the strategic level. However, to provide the national leadership with ample time and the capability to achieve the desired political solutions, the GAF must be able to defend the nation's sovereignty. It is critical that the GAF is capable of defending Georgia's territory and her people, until Government finds other ways to resolve the problem. To achieve these goals the GAF must be able to conduct major combat operations for an extended period without external support. This requires the GAF to develop appropriate warfighting capabilities. This thesis explores the possibility of a large-scale military intervention, describes the threats and searches for the most critical warfighting capabilities, which the GAF must possess to counter those threats. This study also suggests ways to develop required capabilities.

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I would like to dedicate this study to Georgian Armed Forces, with the hope that it will become just another brick in the building process of professional Georgian Army. The work is dedicated also to the fallen soldiers of the Georgian Armed Forces, who sacrificed their lives defending the independence, sovereignty, territorial integrity and prosperity of their motherland, Georgia. I hope, this work can help to compensate partially their shed blood in the future.

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## ACRONYMS

AA	Avenue of approach
AD/ ADA	Air Defense/Air Defense Artillery
APC	Armored Personnel Carrier
AT	Anti-Tank
ATK	Attack
BCS	Battle Command System
BDA	Battle Damage Assessment
BDE	Brigade
BLOS	Beyond Line of Site
BN	Battalion
C2	Command and Control
CAS	Close Air Support
CBRNE	Chemical, Biological, Radiological and Nuclear
CIA	Central Intelligence Agency
COA	Course of Action
COG	Centers of Gravity
CPT	Captain
DIME	Diplomatic, Informational, Military and Economic
DOTMLPF	Doctrine, Organization, Training, Materials, Leadership and Education, Personnel and Facilities
EA	Electronic Attack
EM	Electromagnetic
EW	Electronic Warfare

FM	Field Manual
FMA	Foreign Military Assistance
GAF	Georgian Armed Forces
GDP	Gross Domestic Product
GSSOP	Georgia Sustainment and Stability Operations Program
GTEP	Georgian Train and Equip Program
GUAM	Georgia, Ukraine, Azerbaijan and Moldova
HQ	Headquarters
IFV	Infantry Fighting Vehicle
IN	Infantry
IO	Infantry
IPAP	Individual Partnership Action Plan
JP	Joint Publication
LOC	Lines of Communications
LOS	Line of Site
LTC	Lieutenant Colonel
LZ	Landing Zone
MBT	Main Battle Tank
MDECOA	Most Dangerous Enemy Course of Action
METL	Mission Essential Task List
METT-TC	Mission, Enemy, Terrain, Troops, Time Available and Civilian Considerations
MLECOA	Most Likely Enemy Course of Action
MOD	Ministry of Defense
MRLS	Multiple Rocket Launcher System

MTOE	Military Table of Organization and Equipment
NCO	Non Commissioned Officer
NDA	National Defense Academy
NLOS	Non-Line of Site
NMS	National Military Strategy
NSC	National Security Concept
PFP	Partnership for Peace
PMESII-PT	Political, Military, Economic, Social, Information, Infrastructure, Physical Terrain and Time
PSYOPs	Psychological Operations
ROMO	Range of Military Operations
SF	Special Forces
SP	Self-Propelled
T	Tracked
TMEC	Training and Military Education Command
TPT	Transportation
TRGT	Training
UAV	Unmanned Aerial Vehicle
UK	United Kingdom
UN	United Nations
UXO	Unexploded Ordinance
W	Wheeled
WB	World Bank
WMD	Weapons of Mass Destruction

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## CHAPTER 1

### INTRODUCTION

It is the strong will of the citizens of Georgia to establish democratic order, economic freedom, a social state governed by the rule of law, to ensure universal human rights and freedoms and to strengthen state independence and peaceful co-existence with other nations.

— Preamble to the Constitution of *Georgia*

Between 30 November 1939 and 13 March 1940, The Soviet Union and Finland engaged in a struggle that would determine the future of that small, neutral Scandinavian country. The forces of the former were significantly larger in both manpower and material. In addition, the Russian superiority in economic infrastructure and national power base would have seemed to pre-ordain the decision. Yet, the Finnish forces were able to extend the conflict and produce a military outcome that allowed a political end-state favorable to the nation, if not in absolute terms, then relative to the potentially disastrous results that would be expected by the initial analysis.

— William H. Deane LTC. USAR  
Elements of Operational Design in the Russo-Finnish War

### Background

It has been over two decades since the breakup of Soviet Union, and Georgia gained its Independence. The Russian Empire controlled Georgia for almost 200 years with different forms of government (Tsarist Russia, Soviet Union). During these two decades, the Georgian state was forcefully drawn in to a number of military conflicts with internal and external adversaries. During these conflicts, there were many examples of successful operations conducted by the Georgian Armed Forces (the GAF) at the tactical level, but overall outcomes of these conflicts were not good for Georgia. As a result, of these conflicts Georgia lost control over almost 20 percent of its territories. Overall, approximately 80 percent of the residents of occupied territories (about 500 000) left their

homes and currently about 261000 refugees from occupied territories reside in unoccupied parts of Georgia.<sup>1</sup>

Some of the recent examples showed that in the 21st century there is possibility of escalation to major combat operations with the employment of conventional forces.

### Statement of the Problem

As described in *National Security Strategy of Georgia*, one of the greatest threats to the national security of Georgia is the possibility of the military intervention by larger countries.<sup>2</sup>

Compared to the other countries in the Caucasus region, Georgia has the smallest Military force.<sup>3</sup> In case of intervention by other countries, the Georgian Military most likely will have to counter forces many times larger and better equipped. Considering the small size of Georgia in terms of territory as well as limitations of other resources such as demographic, natural, economic and industrial, as well as military equipment, it is difficult for Georgia to maintain a large professional military force to counter any possible aggression. Therefore, different ways (innovative, creative) to fill the gaps created by the shortages of resources need to be explored. There should be clear objectives set, and ways to achieve those objectives identified.

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<sup>1</sup>Ministry of Defense of Georgia, *National Security Concept of Georgia*, <http://mod.gov.ge/en/NSC/> (accessed September 24, 2012).

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.



### Analysis of the Problem

Military intervention by larger countries may be aimed at the full or partial occupation of Georgian territories, overthrow of the government or change of political system in Georgia. Neither result will be acceptable for the Georgian people. If such an intervention from a larger country occurs in Georgia, it is not certain that other organizations, such as North Atlantic Treaty Organization (NATO) or United Nations (UN) will be able to intervene in a timely and effective manner (diplomatically, economically, or militarily ) to stop the aggression. It may take several weeks or even months before the international community, political or military organizations can make a decision to intervene and find ways to influence the aggressor to cease military actions against Georgia.

One example of delayed involvement of international organizations is the Syrian Civil War. The conflict started in March 2011, and as of December 2012, no resolution or intervention has been achieved. International community tried to intervene but any significant success to stop the war has not been made.<sup>4</sup>

For these reasons and lessons learned from the past, it is very important for Georgia to be able to defend its interests with Georgia's organic forces as long as required in order to preserve its sovereignty. To achieve these goals requires conducting a number of very complex measures and preparations mainly on the political and strategic level. However, whatever political ways or methods the Georgian government chooses to stop such an intervention, it is still paramount for Georgia to have capable military forces

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<sup>4</sup>International Coalition for the Responsibility to Protect, "Syrian crisis," <http://www.responsibilitytoprotect.org/index.php/crises/crisis-in-syria> (accessed December 5, 2012).

to oppose such acts. Generally, the role of Georgian Armed Forces (the GAF) in case of external military aggression can be to defend the country's sovereignty through military force to give the government enough time and freedom of action to employ effective measures to stop the aggression. The objective of this thesis is to find, what warfighting capabilities the GAF requires to effectively defend the country's sovereignty from aggression of significantly superior military power.

### The Research Questions

Primary Research Question: How can Georgia create military forces capable to effectively defend the country's sovereignty from the aggression of significantly larger military power?

The Subordinate Research Questions (SRQ) and Tertiary Research Questions (TRQ):

SRQ 1: Defining the operational environment in Georgia

TRQ 1.1: Strategic guidance:

TRQ 1.2: Nature of the conflict / likely nature of military intervention.

TRQ 1.3: Relevant history:

TRQ 1.4: PMESII-PT analysis

SRQ 2: What are desired end-states for the GAF in case of foreign military intervention?

TRQ 2.1: Opposing Endstate and Objectives

TRQ 2.2: Centers of Gravity

TRQ 2.3: Friendly Endstate and Objectives

SRQ 3: What warfighting capabilities the GAF must have to defend country against foreign military intervention?

TRQ 3.1: Problem statement:

TRQ 3.2: Tensions between current conditions and desired Endstate (Constraints and Limitations):

TRQ 3.3: Elements within OE that must change to achieve desired Endstate:

### Assumptions

1. Negative political relationships with other countries will not be addressed in this research. Because of this factor, when defining the operational environment, the strategic and operational objectives of an aggressor as well as the military or other capabilities cannot be directly attributed to any country. Therefore, this work will describe the general threats that the GAF may face and the conclusions in chapter 4 will be based on assumptions on past experiences.

2. It is generally assumed that the aggressor may be the country (conditionally “Country X”) with military, economic, and technological capabilities vastly superior to Georgia.

3. Use of weapons of mass destruction (WMD) against Georgia by an aggressor is not likely. It is not likely that an invader will use Weapons of Mass Destruction (WMD) against Georgian Armed forces if conflict will break out. It is still not likely even if aggressor suffers large amount of casualties and will be threatened not to achieve its political, strategic, and operational objectives. Several factors support this assumption:

To achieve its overarching political goals aggressor will need to accomplish number of the strategic objectives such as changing legitimate Georgian government.

One of the important conditions to support this objective is to win the peoples hearts and gain their support. This will help the aggressor to minimize the resistance and establish control over state as soon as possible thus legitimizing its actions in rapid manner. Use of WMD would not support this strategy.

The other reason why use of WMD by possible aggressor against Georgia is not likely is that this fact will have extremely negative reaction in region and worldwide, which can lead to various sanctions from the world's organizations and leader in countries such as EU and USA. Exposing himself to such sanctions will not be rational for an invader.

The third reason why an invading country will not use the WMD is the fact that aggression against Georgia is most likely to happen by a country that is physically neighboring Georgia. Due to small territories of Georgia, the borders are not too far from neighboring countries so WMD effects may pose risks to the other countries in the region including the invading country.

### Limitations

The political relationships of Georgia with neighboring countries are not discussed in this thesis. The aim of this research is not to search for possible political solutions of this problem. Therefore, the desired warfighting capabilities of the GAF will not be addressed on any specific country's military forces. Classified materials and the exact status and organization of the GAF will not be described throughout the work either.

### Delimitations

Examples from Georgia's past conflicts, as well as other countries similar experiences are used to support the arguments throughout the work.

### Significance of the Study

The conclusions achieved in this study may be useful for the GAF to determine the ways to build their military capabilities, which are critical to achieve strategic objectives and effectively defend countries sovereignty.

## CHAPTER 2

### LITERATURE REVIEW

Multiple source documents provide the research materials needed to answer the primary and secondary research questions. These documents provide data, which helps to describe operational environment and predict nature of the possible intervention, as well as to determine objectives and the warfighting capabilities required by the GAF to effectively defend the country's sovereignty.

In the first part of this chapter source selecting criteria will be described. The second part will be an overview of sources by type.

#### Criteria

Main criteria used to select the material for sources are classification, relevance, and accuracy.

#### Classification

Only unclassified sources are used for this research. This is the most important criterion for research because it allows the unlimited distribution of this work to different organizations and the general public. The intent of this research is to help the Georgian Armed Forces to establish effective capabilities by identifying areas needed to be improved and classification of this work would limit those requirements. It also makes it easy to gain access to the sources, especially in conditions of limited time.

## Relevance

A large amount of material is available which directly or indirectly address this problem. Only material relevant to the Georgian reality will be used for this research. This material will include the sources that help to describe operational environment in Georgia and the historical examples of other countries with similar experiences. Because the GAF is currently working to adopt elements from U.S. Army doctrine, U.S. Army doctrinal publications will be also used in this research.

## Accuracy

Accuracy is another important criterion for selecting the sources for this research. A significant amount of the reports and articles are available on-line. Accuracy of the sources will determine the credibility of this work. Multiple government and military official on-line documents are used to describe the current operational environment and nature of the threats that the GAF may face in the future.

## Review of Sources

This chapter describes the sources used in this research to find the answers on primary and subordinate research questions.

In order to find the answer to the primary research question: “How can Georgia create military forces capable to effectively defend the country’s sovereignty from the aggression of significantly larger military power?” first, other research questions need to be answered. These questions are used to describe current, realistic operational environment, evaluate possible threats, and determine possible objectives and desired

Endstate for the GAF. After these questions are answered, the desired warfighting capabilities and the ways to gain those capabilities will be identified.

### Official Documents

Information from *Georgian Constitution* and Georgian strategic national planning documents such as *National Security Concept of Georgia*, *Ministers Vision*, *National Military Strategy of Georgia* together with official documents of other organizations such as North Atlantic Treaty Organization (NATO), European Union (EU), World Bank (WB), Central Intelligence Agency (CIA): World Fact Book, are used to describe current operational environment in Georgia and describe the nature of possible threat. These documents provide the legal basis and serve as a reference point for research. These materials provide the general concept to follow for the research questions.

To further support the arguments and to give the operational picture more clarity, other sources are used as well. These sources are articles and reports from official websites of various Georgian and international organizations. Some of these documents are: (1) Website of Ministry of the Foreign Affairs of Georgia: Information on NATO-Georgia Relations; (2) Global Finance: *Country Economic Reports: Georgia*; (3) NATO Parliamentary Assembly, Declaration 373, *The Conflict between Georgia and the Russian Federation*; (4) BBC News World; *Ivanishvili Confirmed as Prime Minister of Georgia*; and (5) United States Senate; *Striking the Balance*: A report to the Committee on Foreign Relations.

Documents such as “Military Balance” and historical sources are used as well to augment the arguments and arrive to the conclusions.



## Doctrinal Publications

U.S. Army and U.S. Joint doctrinal publications are widely used in this research to apply operational design and identify the most critical warfighting capabilities required for the GAF to achieve its military objectives. Doctrinal publications are the primary sources that will be used in this work to find the solutions of the problem and determine the ways to gain those warfighting capabilities (DOTMLPF concept). These doctrinal publications are FM 5-103, *Survivability*; JP 5-0, *Joint Operational Planning*; F100, *Managing Army Change*; TRADOC Pam 525-66, *Force Operating Capabilities*.

In addition to these sources, related examples from Georgian, Korean, and Finland experiences are used in support of the arguments to add credibility to the conclusions.

The DOTMLPF concept is used in this research as a primary model to find the answers on the research questions.

## Books

The books in this work are used primarily as a reference for the historical examples. There are many sources available that provide good information about Georgia's political, economic, and social reality and help to describe operational environment. Books are also used to describe the examples from other countries similar experiences. The books used in this research: (1) *Nations in Transition: The Caucasian Republics*, by Margaret Kaeter, describes history of the Caucasus region and political, economic, and social environment in Georgia and Caucasus region. (2) *A Little War That Shook the World*, by Ronald Asmus, describes the brief Russo-Georgian War of 2008, and provides facts and analysis of the geopolitical consequences of the conflict. It also

provides valuable facts about political environment in Georgia and condition of the armed forces and during the war. (3) *Georgia: Pawn in the New Great Game*, by Per Gahrton, describes political developments in Georgia in 1990s and early 2000s.

#### Related Research

To ensure that research topic had not been explored in past, the other works were also examined that were addressing to the topics similar to this. Two works had been found that were covering the topics similar to this works.

First research “Georgian Light Infantry Battalions in the Global War on Terrorism,” by Zakaria V. Nadirashvili (CPT Georgian Army, 2005), suggests the desired capabilities of Georgian Armed Forces Light Infantry Battalions to successfully conduct tactical level operations. The focus of this thesis is limited to the research of Georgian Infantry Battalions required capabilities to fight in urban environment and oriented on the asymmetric threat rather than countering large military forces.

Second work “Strategic Defense against the Larger Power,” by Vladimer Chachibaia, (LTC Georgian Army, 2008) is a strategy research project and focuses on the exploring the different strategic concepts that Georgia may employ to defend himself from the aggression of larger military forces. This research does not seek to find the specific capabilities for the GAF to be able to defend the country’s sovereignty.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### Background

The purpose of this study is to find the warfighting capabilities that the Georgian military need to develop in order to effectively counter possible aggression by larger and technologically superior military powers.

This chapter describes the methodology used to find the answers on the primary and subordinate research questions.

Before describing the research methodology, it is appropriate to outline once again the structure of this work in order to give better understanding of the models used for research in this work.

Chapter 1 presents the background information and describes the problem. It provides the overall picture of the political, strategic, and operational environment in Georgia and describes significance of the study. It also states the primary and secondary research questions that must be answered in order to find the solution of the problem. Chapter 1 also describes the limitations and delimitations helping to narrow the topic and setting the frame for the research.

Chapter 2 examines all the resources that were used for this research paper. It divides the sources in to the different categories and describes their roles in the finding the answers on those research question. This chapter describes primary sources (doctrinal publications) that are used to find the answer on the primary research question and other material (historical, official documents, etc.) that are used to support the various arguments.

Chapter 3 describes methodology used to narrow the scope of the thesis and describes line of thought to clarify the statements. It describes the military models that are used in this paper to frame the work.

Chapter 4 conducts the analysis of the problem through various military models and suggests most optimal solutions of this problem.

Chapter 5 based on the conclusions made in chapter 4 provides recommendations for solution of the problem and suggests the areas for future research.

The following methodology is used in this work to answer the primary research question: How Georgia can create military forces capable of successfully defending the country from possible intervention by other larger military powers?

The qualitative analysis of the information is used in this work to come to clear conclusions.

Operational design process is used to define the current operational environment in Georgia, frame the problem that needs to be solved, and find the desired Endstate that the GAF needs to achieve.

The operational environment in Georgia is described first. The model used for this is Operational Design Process, which helps to describe the operational environment in Georgia and define the nature of the possible intervention. These include identification of friendly and enemy strategic end- states, strategic objectives, military end-states, military objectives, effects and friendly and enemy Centers of Gravity (COG)

The correct analysis of operational environment in Georgia is a key step in this work, because all the following steps are based on the conclusions made in this paragraph. The analysis of the operational environment in Georgia is mainly based on the

information found in the Georgian MOD and other agencies official documents. The information from other international organizations and US doctrinal publications are used as well for this reason.

The current operational environment and nature of possible intervention are described using the PMESII-PT and METT-TC models. The size and nature of the intervening military forces and aggressor's possible objectives are described very generally using many assumptions. This information about the operational environment in Georgia depicts the possible threats.

After the operational objectives and desired end-state of Georgian Armed Forces are identified, most critical warfighting capabilities required by the GAF to achieve desired Endstate and required changes to gain those warfighting capabilities are determined. The DOTMLPF model is applied to find the ways of developing those capabilities. U.S. Army doctrinal publications are used to examine those ways.

Historical examples from countries with the similar experiences as well as the experiences of the GAF from past conflicts are used to support the arguments and add credibility to the conclusions.

## CHAPTER 4

### ANALYSIS

The GAF must be prepared to meet the security challenges. Highly trained military personnel, a modern military education system, a comprehensive human resource management system, a flexible and effective reserve system and further integration of modern technologies to enhance the GAF combat readiness are vital to respond to challenges and further improve NATO interoperability.

— Ministry of Defense Of Georgia  
*Minister's Vision 2012-2013*

In order to answer the primary research question: “How can Georgia create military forces capable to effectively defend the country’s sovereignty from the aggression of significantly larger military power?” the subordinate research questions must be answered first. The subordinate research questions to be answered are SRQ 1: Define the operational environment in Georgia; SRQ 2: What are desired end-states for the GAF in case of foreign military intervention; SRQ 3: What warfighting capabilities the GAF must have to defend country against foreign military intervention?

The operational design process is used to define the operational environment, determine the required warfighting capabilities that the GAF needs to develop in order to defend the country from intervention. After these warfighting capabilities are identified, DOTML-PF model will be applied to find most appropriate ways to adopt those warfighting capabilities to meet the requirements.

What Warfighting Capabilities Does the GAF Need to Have in Order  
to Accomplish Their Mission and Achieve Desired End State?

Defining the Operational Environment

Strategic Guidance

National Security Concept of Georgia describes following as a National Values of Georgia:

Sovereignty and territorial integrity: Georgia is an independent, united, and indivisible state within the borders defined by the Constitution of Georgia. It respects the sovereignty and territorial integrity of other states and expects the same from the...<sup>5</sup>

Freedom: The rights and freedoms of the Universal Declaration of Human Rights, the UN Convention on Civil and Political Rights, and the European Convention on Human Rights and Fundamental Freedoms are recognized by Georgia and guaranteed by its Constitution. Georgia guarantees the rights and freedoms of all citizens and groups residing in Georgia.”<sup>6</sup>

Democracy and rule of law: Georgia adheres to democratic values and principles, and, based on these, establishes a system of democratic governance in which state power is limited by law and distributed among the legislative, executive, and judicial branches.”<sup>7</sup>

Security: Georgia strives to ensure the security of the state, its citizens, and institutions within its internationally recognized borders.<sup>8</sup>

Prosperity: Georgia recognizes that the pursuit of prosperity is a fundamental human right to guarantee, one that is only possible in a free environment.<sup>9</sup>

Peace: Georgia strives to establish relationships with all nations based on the norms and principles of international law. In order to resolve disputes, Georgia appeals to peaceful and internationally accepted methods.<sup>10</sup>

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<sup>5</sup>Ministry of Defense of Georgia, *National Security Concept of Georgia*.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

<sup>8</sup>Ibid.

<sup>9</sup>Ibid.

Based on the National Values of Georgia, National Security Concept of Georgia identifies the following National Interests:<sup>11</sup>

1. Georgia is determined to ensure sovereignty and territorial integrity of country using all the legitimate and peaceful resources.
2. Georgia is developing state institutions and strengthening democracy by creating a model of governance that guarantees the further and sustainable development of the country's democratic political system.
3. Georgia is developing an efficient national security system, which can guarantee the development of state and ensure the security of its citizens.
4. Georgia is strengthening national unity and civil consent by protection of the interests of its citizens, their rights, and freedom.
5. European and Euro-Atlantic integration is one of the biggest priorities of Georgia in order to strengthen democracy and ensure its national security.
6. Ensuring stable long-term economic growth is critical for countries development.
7. Ensuring energy security by diversification of energy sources and transportation routes
8. Ensuring regional stability by reinforcing the stability and security and supporting the peaceful resolution of the existing disagreements in the region.
9. Strengthening the transit role of Georgia can contribute to improvement of the economic and physical security of the country.

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<sup>10</sup>Ibid.

<sup>11</sup>Ibid.



10. Environmental security of Georgia and the region is critical aspect to ensure the public health and safety.
11. Ensuring civil integration and maintaining national and cultural uniqueness.
12. Security of cyber space is very important to the national interests of Georgia, because critical infrastructure is becoming more dependent on electronic information.
13. Demographic security.
14. Relations with the diaspora.

National Security Concept of Georgia accepts the possibility of a full-scale military intervention by larger countries as one of the major threats to the national security of Georgia.<sup>12</sup>

This intervention will threaten National Interests and may put under risk National Values of Georgia.

#### Nature of the Conflict/Likely Nature of Military Intervention

The reasons for military intervention from another larger country, hypothetically “Country X,” into Georgia may be due to territorial disputes or other geopolitical interests of the aggressor. The conflict of the interests between Georgia and other larger countries, which do not share the same values as Georgia may result in military aggression by a larger country against Georgia. This aggression may take the form of full-scale military intervention into the Georgian territory, which will be considered as violation of National Sovereignty of Georgia.

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<sup>12</sup>Ibid.

It is less likely that war will break out immediately and invaders cross the territorial boundaries of Georgia with large forces without any indicators. Most likely the aggressor first will use other elements of national power such as Diplomatic, Informational and Economic (DIME) pressure on the Government of Georgia (GOG) and its people to make them comply with their will and to achieve their political objectives. If those mechanisms fail, the aggressor will try to set the conditions for full-scale military intervention, and after those preconditions are met, the aggressor will try to intervene militarily conducting major combat operations to destroy the GAF and facilitate the fulfillment of their political objectives. The description of those preconditions and the political objectives of Country X are outside of the framework of this study but likely capabilities, the organizational structure, and the nature of the military actions of opposing forces will be described in paragraphs below.

### Relevant History

Throughout history, Georgia was involved in many conflicts, constantly defending itself from larger powers such as the Persian, Ottoman, Byzantine and Russian Empires, as well as Mongols, Arabs and Seljuk Turk.<sup>13</sup> This is not a full list of the great powers that conquered or annexed Georgia throughout history but there always has been great interest of large countries in Georgia because of the Country's important Geopolitical location.

Invasion of Georgia by other larger countries in 21st century may not look very realistic, but recent examples have shown that this possibility still exists in today's world.

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<sup>13</sup>Margaret Kaeter, *Nations in Transition: The Caucasian Republics* (New York: Library of Congress, 2004), 3-32.

The Russo-Georgian war of 2008 is good example of larger power military intervention into the neighboring, smaller country's internal affairs.<sup>14</sup> In August 2008, Russia conducted a full-scale military intervention into the Georgian territory, which is violation of the sovereignty of an independent nation.<sup>15</sup> The U.S. and several European countries later recognized the occupation of Georgian territories by Russia.<sup>16</sup>

### PMESII-PT Analysis

Considering the limitations described in chapter 1, discussion of Georgia's negative political relationships with other countries will be avoided in this research. Because of this factor, when defining the operational environment, the strategic and operational objectives of an aggressor as well as the military or other capabilities cannot be directly attributed to any country. Therefore, this chapter will describe the general threats that the GAF may face and many conclusions in this chapter will be based on assumptions based on past experiences.

### Political

#### Friendly

Georgia is a democratic semi-presidential republic, with President as the head of state, and Prime Minister as the head of Government. Government consists of three

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<sup>14</sup>Ronald Asmus, *A Little War That Shook the World* (New York: Palgrave Macmillan, 2010), 215-34.

<sup>15</sup>NATO Parliamentary Assembly, Declaration 373, *The Conflict between Georgia and the Russian Federation*, adopted November 18, 2008, <http://www.nato-pa.int/Default.asp?SHORTCUT=1654> (accessed September 23, 2012).

<sup>16</sup>Rusiko Machaidze, "Russian Military Presence Called Occupation," *Democracy and Freedom Watch*, July 10, 2012, <http://dfwatch.net/russian-military-presence-called-occupation-94005> (accessed September 23, 2012).

branches, executive, legislative, and judicial. The executive branch consists of the President and the cabinet ministers. The Cabinet is headed by the Prime Minister. The ministers of defense and interior are not members of the Cabinet and are subordinated directly to the President of Georgia. The Legislative branch of government is the Parliament of Georgia. It is unicameral and has 150 members. Members of parliament are elected for four-year terms.<sup>17</sup>

Human rights in Georgia are guaranteed by the country's constitution. There is an independent human rights public defender elected by the Parliament of Georgia to ensure such rights are enforced.<sup>18</sup> The defense of rights of ethnic minorities in Georgia is guaranteed by the Framework Convention for the Protection of National Minorities, which Georgia ratified in 2005.<sup>19</sup>

The political system remains in the process of transition, with frequent adjustments. Nevertheless, considerable progress has been made in recent years in terms of reforms. The new Government of Georgia is oriented toward the West and strives to transform Georgia into a European democracy. There is growing U.S. and European Union influence in Georgia, and the integration of the Georgia into the North Atlantic Treaty Organization (NATO) and the European Union (EU) is part of Georgian National

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<sup>17</sup>Government of Georgia, *Constitution of Georgia*, [http://www.government.gov.ge/index.php?lang\\_id=E&sec\\_id=65](http://www.government.gov.ge/index.php?lang_id=E&sec_id=65) (accessed November 2, 2012).

<sup>18</sup>*Ibid.*

<sup>19</sup>Council of Europe, “Geographical Reach of the FCNM,” [http://www.coe.int/t/dghl/monitoring/minorities/1\\_AtGlance/PDF\\_MapMinorities\\_bil.pdf](http://www.coe.int/t/dghl/monitoring/minorities/1_AtGlance/PDF_MapMinorities_bil.pdf) (accessed November 2, 2012).

Security Strategy.<sup>20</sup> The majority of the Georgian population and political parties support government initiatives for NATO membership. In 2006, the Georgian parliament voted for integration of Georgia into NATO.<sup>21</sup> As Georgian people desire NATO membership, military reform is underway to transform the Military capabilities to operate with NATO forces.

In 1992, Georgia joined the North Atlantic Cooperation Council and in 1994 joined the Partnership for Peace (PFP) program.<sup>22</sup> On November 21-22, 2002, at the NATO Summit in Prague, Georgia made a declaration on its aspiration to NATO membership and expressed its desire to participate in "Individual Partnership Action Plan" (IPAP) program.<sup>23</sup> On October 29, 2004, NATO approved the Individual Partnership Action Plan of Georgia.<sup>24</sup> In 2005, two agreements were signed on the appointment of Partnership for Peace liaison officer between Georgia and the NATO and on the provision of host nation support to transit NATO forces through Georgia.<sup>25</sup> In 2010, during the NATO Defense Ministerial and North Atlantic Council meeting in Lisbon and 2012, NATO Chicago Summit, NATO member countries reaffirmed the 2008 Bucharest Summit decision that "Georgia will become a member of NATO," and reiterated

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<sup>20</sup>Ministry of Defense of Georgia, *National Security Concept of Georgia*.

<sup>21</sup>Ministry of Foreign Affairs of Georgia, "Information on NATO-Georgia Relations," [http://www.mfa.gov.ge/index.php?sec\\_id=455&lang\\_id=ENG](http://www.mfa.gov.ge/index.php?sec_id=455&lang_id=ENG) (accessed November 20, 2012).

<sup>22</sup>*Ibid.*

<sup>23</sup>*Ibid.*

<sup>24</sup>*Ibid.*

<sup>25</sup>*Ibid.*

continued support to the sovereignty and territorial integrity of Georgia.<sup>26</sup> In 2006, Georgia and the EU signed a joint statement on the Georgia-EU Action Plan within the European Neighborhood Policy.<sup>27</sup>

The parliamentary elections in October 2012 brought the opposition party “Georgian Dream” to the power. The new prime minister of Georgia announced shortly after the elections that the new government of Georgia will remain loyal to the country’s fundamental values and will further seek integration of Georgia into the western institutions such as North Atlantic Treaty Organization (NATO) and EU.<sup>28</sup>

### Opposing

Possible reason for Country X intervention into Georgian internal affairs by may be geopolitical, economic, strategic security interests or conflicts of interest’s between the countries. The country that will be able to intervene militarily into the Georgia’s internal affairs will most likely be a large country with big political weight, with large economic and military capabilities. Conflicts of interests or the aspirations of Georgia to become part of the western institutions may trigger the conflict.

No matter what political circumstances trigger Country X’s military intervention in into Georgian territory, the aggressor’s main target will be government of Georgia. In order to achieve its political objectives, one of the conditions for Country X will be

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<sup>26</sup>Ibid.

<sup>27</sup>European Union, “Summary on EU-Georgia Relations,” [http://eeas.europa.eu/georgia/eu\\_georgia\\_summary/index\\_en.htm](http://eeas.europa.eu/georgia/eu_georgia_summary/index_en.htm) (accessed November 2, 2012).

<sup>28</sup>BBC News World, “Ivanishvili Confirmed as Prime Minister of Georgia,” Last updated October 25, 2012, <http://www.bbc.co.uk/news/world-20081392> (accessed November 2, 2012).

establishing control over the Georgian Government. This control would enable it to manipulate by Georgian international and regional policies.

One of the examples of this strategy is the annexation of the Georgian state by Russian Empire in 1801:

In 1783, Russia and the eastern Georgian Kingdom of Kartl-Kakheti signed the Treaty of Georgievsk, which recognized the bond of Orthodox Christianity between Russian and Georgian people and promised eastern Georgia protection. However, despite this commitment to defend Georgia, Russia rendered no assistance when the Turks and Persians invaded in 1785 and in 1795, completely devastating Tbilisi and massacring its inhabitants. This period culminated in the 1801 Russian violation of the Treaty of Georgievsk and annexation of eastern Georgia, followed by the abolishment of the royal Bagrationi dynasty, as well as the autocephaly of the Georgian Orthodox Church. Following the annexation of Eastern Georgia, the western Georgian kingdom of Imereti was annexed by Tsar Alexander I of Russia.<sup>29</sup>

Another example is the occupation of Georgia by Soviet Russia in 1921. After short-lived independence from Russian empire from 1918 to 1921, Georgia once again was annexed by Russia, this time by soviet Russia:

In February 1921, Georgia was attacked by the Red Army. The Georgian army was defeated and the Social-Democrat government fled the country. On February 25, 1921, the Red Army entered the capital Tbilisi and installed a Moscow directed communist government, led by Georgian Bolshevik Filipp Makharadze.<sup>30</sup>

In conclusion, if Country X will attempt to infringe Georgian sovereignty by intruding in its internal affairs whatever political objectives it may have, its most likely

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<sup>29</sup>ERDO Group Travel, "About Georgia," [http://www.erdotravel.com/index.php?option=com\\_content&view=article&id=62&Itemid=83](http://www.erdotravel.com/index.php?option=com_content&view=article&id=62&Itemid=83) (accessed November 2, 2012).

<sup>30</sup>UCBMUNC 2011, "Background Guide, International Court of Justice," Updated February 14, 2011, <http://www.ucbmunc.org/wp-content/uploads/2010/07/ICJ-BackgroundGuide-Feb-14.pdf> (accessed December 5, 2012).

strategic objectives will be the quickly defeat the Georgian Armed Forces, and gaining control over the government to give legitimacy to their actions.

#### Neutral

Georgia has good relations with most of its neighbors and is a member of many international organizations, such as: United Nations, the Council of Europe, the World Trade Organization, the Organization for Black Sea Economic Cooperation, the Organization for Security and Cooperation in Europe, the Community of Democratic Choice, the GUAM Organization for Democracy and Economic Development, the Asian Development Bank and many other international organizations.<sup>31</sup>

In the case of a break out of a crisis in Georgia, political support from other countries may be expected. A good example of this is the 2008 Russian-Georgian war, during which effective involvement of the European countries, US, and international organizations promptly facilitated the cease-fire.<sup>32</sup> On the other hand, there is a high probability that the process of stopping aggression may be delayed or fail. In this case, Georgia will be left alone before the aggressor.

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<sup>31</sup>Central Intelligence Agency, The World Factbook, "Middle East: Georgia," <https://www.cia.gov/library/publications/the-world-factbook/geos/gg.html> (accessed November 8, 2012).

<sup>32</sup>North Atlantic Treaty Organization, "NATO's Relations with Georgia," [http://www.nato.int/cps/en/natolive/topics\\_38988.htm](http://www.nato.int/cps/en/natolive/topics_38988.htm) (accessed September 23, 2012).



## Military

### Friendly

Georgia has the smallest military in the region.<sup>33</sup> Because of the limitation of the resources such as Economic, Industrial and Manpower, Georgia cannot maintain large standing army. This will make it hard or impossible for Georgia to achieve superiority or even parity with the aggressor's large conventional military forces in terms of military capabilities in any domain, such as Air, Land, Maritime, Space, or Cyberspace.

Doctrine: Two main doctrinal documents on the political and strategic level that set the missions and prioritize the development of the GAF are National Security Concept and National Military strategy. Based on the National interests of Georgia described in the National Security Concept, the National Military Strategy sets the priorities for the GAF to prepare them to meet future challenges. National Military Strategy directs the GAF to be prepared to defend country's interests without external support and at same time to develop capabilities to operate with multinational alliances such as NATO:

The GAF must continue to invest in developing its ability to fight alone, while at the same time supporting the progression from self-defense to collective defense. Where possible, every effort will be made to put resources towards achieving both goals together.<sup>34</sup>

Strategic National Military Objectives are: (1) Defense; (2) Deterrence of enemy/Prevention; (3) Readiness; and (4) International military cooperation.<sup>35</sup>

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<sup>33</sup>Ministry of Defense of Georgia, *National Military Strategy of Georgia*, <http://mod.gov.ge/en/NMS/> (accessed August 26, 2012).

<sup>34</sup>Ibid.

<sup>35</sup>Ibid.

The National Military Strategy of Georgia also describes the necessary criteria for determination of the effectiveness of the Armed Forces. These criteria are the training level of the forces, modern technical equipment, and an effective management system. Currently, the GAF is still experiencing significant shortfalls in all three areas.<sup>36</sup>

Even though the NMS gives overall directions for the development of the GAF, it does not specifically address the large-scale military intervention and does not give the guidance to the GAF to counter this type of threat.

On the operational and tactical levels, the GAF operates according to US army doctrine. Many US Army doctrinal publications, mainly platoon to battalion level FMs, are translated in Georgian language and the GAF units use them. The US army doctrinal publications that are not only translate but adjusted to the Georgian reality are very few, mainly tactical level documents.

### Organization

Note: The organizations of the GAF and subordinate units described in this paragraph are approximate.

The GAF consists of Joint Staff, Land Forces, Special Forces; Department of National Guard, Army Logistics Provision Command, and Training and Military Education Command; (See figure 1).

Joint Staff: Major Missions and functions of the Georgian Armed Forces are defined by the Georgian Law on Defense, and include such objectives as protection of independence, the territorial integrity of Georgia, and fulfillment of the international

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<sup>36</sup>Ibid.

agreements. In order to meet the national interests of Georgia, the GAF identified following missions to be accomplished:

1. To maintain forces in a high state of readiness;
2. To carry out political decisions made by the executive and legislative branches of the Georgian government;
3. To identify threats based on the current military-political situation;
4. To develop the force structure of the GAF;
5. To accomplish military cooperation in accordance with international treaties and agreements.<sup>37</sup>

Land Forces is the largest component of the GAF. It also incorporates aviation and air defense units.<sup>38</sup> The land forces are responsible for the defense of Georgia's sovereignty from any types of military threats. The Land Forces are organized as follows: HQ, Land Forces Command; 1st, 2nd, 3rd, 4th and 5th Infantry Brigades; 2-Artillery Brigades; 1-Engineer Brigade; 1-Air Defense Brigade; 1-Aviation Brigade;<sup>39</sup> 2-Separate Light Infantry Battalions, 1-Separate Technical Reconnaissance Battalion, 1-Separate Signal Battalion, Medical Battalion, Military Police Battalion;<sup>40</sup> 1-Central Combat Command Post; 1-Air Defense Equipment Repair Base; 1-Mixed-Transportation Aviation Base; 1-Communication Unit.

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<sup>37</sup>Ministry of Defense of Georgia, *Joint Staff, Mission*, <http://mod.gov.ge/en/ArmedForces/JointStuff/Mission/> (accessed November 12, 2012).

<sup>38</sup>Central Intelligence Agency.

<sup>39</sup>“Chapter Four: Europe,” *The Military Balance* 112, no. 1 (March 2012): 71-182, <http://www.tandfonline.com/loi/tmib20> (accessed November 20, 2012).

<sup>40</sup>*Ibid.*



The Special Forces are directly subordinated to the Joint Staff as an MOD Main Special Operations Division and are responsible for conducting reconnaissance, unconventional warfare, and counter-terrorism operations. SF command consists of one SF Brigade and Special Operations Main Division.

Special Forces Brigade consists of Special Operations Battalion, Naval Special Operations Squadron, Support Battalion, and Special Forces Training Center;

The Department of the National Guard of Georgia organizes and trains reservists in the peacetime and mobilizes them during a crisis or wartime.<sup>41</sup> Strength of National Guard 1 Light IN BDE (1,578 active reservists).<sup>42</sup>

Army Reserve and Territorial Defense Forces: Reserve of the Military Forces is created to support the military Forces during emergency or/and combat situations, and other situations according to the National Security interests of Georgia. There are three categories of the reserve forces in Georgia:

1. Active Reserve, the goal of which is to maintain mobilization readiness of the civilians. Active Reserve of the Military Forces is staffed with the persons who are discharged from the compulsory military or professional Military Service.
2. Reserve of the National Guards, which aims to participate in logistic operations of the military forces during the combat activities. “Reserve of the National Guard is staffed with the citizens according to their place of residence and administrative-territorial divisions.

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<sup>41</sup>National Guard Department of Georgia, “History of the National Guard,” <http://guard.mod.gov.ge/index.php?page=11&lang=1> (accessed November 2, 2012)

<sup>42</sup>“Chapter Four: Europe,” *The Military Balance*.

3. Individual Reserve, which aims to fill and rotate active subunits of the Armed Forces. A few years ago the GAF started program that would create Reserve forces for regular Army formations. According to the program, each professional army should receive and train reserve personnel. These reserve personnel would be used for replacement of losses in the ranks of regular units. The equipment does not greatly differ from that of regular army unit's equipment.

Individual Reserve is staffed with the persons who are not included in the Active or National Guards Reserve.<sup>43</sup>

Paramilitary Forces: 11,700.<sup>44</sup>

1. Ministry of Interior Troops 6,300

2. Border Guard 5,400

Georgian Coast Guard: The Georgian Navy was abolished 2009, and was incorporated in to the Coast Guard under the Border Guard of Georgia which is subordinated to the Ministry of Internal Affairs with HQ in Poti.<sup>45</sup>

### Training

In early stages of development, the GAF always experienced a lack of the expertise and professionalism inside its officer and Noncommissioned Officer (NCO) corps. Many officers did not even have the professional military education. The

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<sup>43</sup>National Guard Department of Georgia.

<sup>44</sup>“Chapter Four: Europe,” *The Military Balance*.

<sup>45</sup>*Ibid.*

improvements in the Georgian military began when Georgian government in early 2000s took decisive steps to create the professional military and make Georgia part of western collective defense organizations such as NATO.<sup>46</sup> Georgia joined NATO's Partnership for Peace Program in 1994.<sup>47</sup> Since 2002, several programs were conducted with the support of different western allies, mainly with the U.S. military, to train the GAF. Some of the major programs conducted to train the GAF according to the standards of western military were Georgian Train and Equip Program (GTEP) and Georgia Sustainment and Stability Operations Program (GSSOP).<sup>48</sup> Both programs were conducted with support of U.S. military. In total four brigades were trained for participation in stability operations in Iraq and Afghanistan.<sup>49</sup> During the GTEP and GSSOP simultaneously with the units, the Georgian instructor's cadre was prepared to train Georgian units in the future.<sup>50</sup>

The participation in the stability operations in Iraq and Afghanistan, side by side with world's most powerful military forces such as U.S. Army or U.S. Marine Corps, French army and many other nations' military increased the experience and training level

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<sup>46</sup>Per Gahrton, *Georgia: Pawn in the New Great Game* (New York: Palgrave Macmillan, 2010), 97-98.

<sup>47</sup>Ministry of Foreign Affairs of Georgia, "Information on NATO-Georgia Relations."

<sup>48</sup>United States Senate, "Striking the Balance: U.S. Policy and Stability in Georgia" (A Report to the Committee on Foreign Relations. 111th Cong., 1st sess., December 22, 2009), 5

<sup>49</sup>Ibid.

<sup>50</sup>GlobalSecurity.org, "Georgia Sustainment and Stability Operations Program (GSSOP)," <http://www.globalsecurity.org/military/ops/gssop.htm> (accessed September 11, 2012).

of the GAF units.<sup>51</sup> This experience also increased the interoperability of the GAF with its allies.

Besides the stability operations training, the GAF units also plan and conduct the training according to their Mission Essential Task Lists (METL). The Georgian Army is using the U.S. Army Training Management System to train its units. The live, virtual, and constructive simulation training systems are actively used for training the GAF units on different levels from individual to brigade level. These simulation systems help both, to minimize the training costs and increase the efficiency of the training by adding the realism to the training.

Currently Training and Military Education Command (TMEC) of the GAF is responsible for the majority of the training and education conducted in the GAF. It controls various organizations, which provide high level of expertise to train the personnel of the GAF in various areas.

Major training organizations in the GAF are National Training Center “Krtsanisi,” Sachkhere Mountain School, NCO School, and Armor Training Center, which organize different courses to support the GAF needs of professional development of its servicemen.<sup>52</sup>

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<sup>51</sup>Ministry of Defense of Georgia, “Armed Forces: International Missions,” <http://mod.gov.ge/en/ArmedForces/InternationalMission/> (accessed November 2, 2012).

<sup>52</sup>Ibid.



## Material

### Weapon Systems and Platforms

Georgian Armed forces are currently using weapons systems purchased from different countries. Some of these weapons and platforms are former Soviet type of equipment. The GAF also uses many NATO type weapons systems.

Some of the Weapons used in the GAF are:<sup>53</sup>

1. Main Battle Tanks: 93 (T-72);
2. Armored Infantry Fighting Vehicle: 63 (17 BMP-1; 45 BMP-2; 1 BRM-1K);
3. Armored Personnel Carriers: 137

APC (T) 45 (MT-LB);

APC (W) 92: (25 BTR-70; 17 BTR-80; 50 *Ejder*).

4. Artillery Systems: 185

SP: 35 (152mm 32 DANA; 13 2S3; 1 2S19; 203mm 1 2S7);

Towed: 68 (122mm: 55 D-30; 152mm 13: 3 2A36; 10 2A65);

MRL: 37 (122mm: 13 BM-21; 6 GRADLAR; 18 RM-70);

Mortar: 43 (120mm: 13 2S12; 21 M-75; 9 M-120);

AT: ε 50 (MSL ε 10; GUNS ε 40)

AD: SAM, SP (9K35 *Strela-10* (SA-13 *Gopher*)).

5. Aviation and Air Defense Assets:

ATK: 12 (3 Su-25 *Frogfoot*; 7 Su-25K *Frogfoot A*; 2 Su-25UB *Frogfoot B*)

TPT, Light: 9 (6 An-2 *Colt*; 1 Tu-134A *Crusty* (VIP); 2 Yak-40 *Codling*)

TRG 9 L-29 *Delfin*;

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<sup>53</sup>“Chapter Four: Europe,” *The Military Balance*.

Helicopters: TPT 29 Medium 17 Mi-8T *Hip*; Light 12 Bell 205 (UH-1H)

SAM: 1AMBBN 9K37 *Buk*-M1 (SA-11 *Gadfly*), 8(two batteries) - 9K33 *Osa*-

AK (SA-8B *Gecko*), 6-10 9K33 *Osa*-AKM (updated SAM systems).

#### 6. Naval Assets:

PATROL AND COASTAL COMBATANTS: 17

PBF 1 *Kaan* 33

PB 16: 7 *Zhuk* (3 ex-UKR); 2 *Point*; 2 *Dauntless*; 2 *Dilos*(ex-GRC); 1 *Akhmeta*

Amphibious Landing Craft LCU:1-*Vydra* (ex-BUL)

Logistic and Support YTL: 1

In recent years, Georgia is trying to develop its own defense manufacturing capabilities in response to the de facto restrictions on the weapons purchase from the foreign countries. Recently Georgia introduced number of the military systems of its own production. These systems include the Artillery, Armored Infantry Fighting Vehicles, Armored Personnel Carriers and some other systems.<sup>54</sup>

#### Communication Equipment

As a result of different agreements together with the training, the GAF received modern communication equipment and ground sensor systems from U.S.<sup>55</sup>

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<sup>54</sup>Molly Corso, "Georgia: Tbilisi Building Up Weapons Manufacturing Capabilities," Eurasianet.org, March 2, 2012, <http://www.eurasianet.org/node/65076> (accessed September 2, 2012).

<sup>55</sup>*Ibid.*

## Training Equipment

In 2009, new training capabilities were introduced in the GAF. The Live, Virtual, and Constructive Simulation Training Systems were purchased in different countries, mainly in U.S. and Estonia. These Simulation Capabilities were actively used by the GAF units and made their training more effective.

## Leadership and Education

For leader development there are different educational institutions created in the GAF. These institutions support the development of the military leaders from squad to the battalion level. The major institution for Officers development in the GAF is National Defense Academy (NDA).<sup>56</sup> NDA offers officers courses on different levels and branches. Since 2011, NDA has offered the following programs: Cadet Bachelor School, Junior Officer Basic School, Aviation and Air Defense Officer Basic School, Medical Officer School, Captain Career School, Command and General Staff School, School of Advance Defense Studies and Language Training School.<sup>57</sup> Most recently, Command and General Staff College has been established in NDA, which enabled to take education of Georgian military officers to a higher level.<sup>58</sup> Education in the NDA is conducted according to the process of Bologna.<sup>59</sup>

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<sup>56</sup>Davit Agmashenebeli National Defense Academy of Georgia, [eta.mod.gov.ge](http://eta.mod.gov.ge), <http://eta.mod.gov.ge/index.php?page=about&lang=1> (accessed November 2, 2012).

<sup>57</sup>Ibid.

<sup>58</sup>Ibid.

<sup>59</sup>Ibid.

Many of the GAF officers receive education in the Western military schools. Examples are U.S. Army and USMC different level school from Officer Basic Courses to Staff Officer Education institutions. Beside the U.S. Military schools, officers of the GAF also attend the courses in UK, France, Germany, Turkey, and some other NATO countries military institutions.

Despite the big progress in the military education system, the GAF still does not have any specific courses for development of higher-level leaders, including both officers and NCOs.

### Personnel

The Georgian Parliament established total strength of the Georgian armed forces on December 9, 2011 at no more than 37,000 for the year 2012. This limitation does not extend to the state of war, military reserve, and temporary staff of the Defense Ministry of Georgia.<sup>60</sup>

### Facilities

There is limited space in possession of the GAF where units of the brigade could conduct fire and maneuver for training purposes. There are only two polygons in the possession of the GAF, which can support training, and maneuver of the battalion size mechanized formation. However, even those polygons are not sufficiently equipped to effectively support tactical field training or situational training exercises with fire and maneuver of the battalion size and larger formations.

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<sup>60</sup>Ministry of Defense of Georgia, “Georgian Law about the Approval of the Strength of Georgian Armed Forces,” December 9, 2011, <http://mod.gov.ge/assets/uploads/Documents/kbvofirzcvnklwegeo.pdf> (accessed September 26, 2012).

Some improvements have been achieved in the development of the Simulation Training Capabilities to support the individual and collective training process of the GAF units. These systems include the live, constructive, and virtual simulations, which enable to train individual soldiers and conduct exercises from squad to brigade level. These simulation-training capabilities also can support the training on the joint, interagency, and multinational level.

### Summary

The expertise and professionalism gained with participation in stability operations in Iraq and Afghanistan, and introduction of the advance training systems such as a simulation training systems and training management system, help the GAF to raise their performance level in stability operations and become more interoperable with its western allied countries which is significant factor in the matter of Georgian aspiration for joining NATO. Despite these positive factors, the GAF still experiences lack of the resources and expertise in conduct of Major Combat Operations, which are critical for defense of the Nation.

The Russian-Georgian war of 2008 showed that the GAF did not have enough capabilities and expertise to conduct operations against enemy on two or more directions. It also revealed shortages in Anti-Tank and Air defense capabilities and shortfalls in the GAF C2 system.<sup>61</sup>

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<sup>61</sup>Asmus, 172-82.

## Opposing Capabilities

The Country X is assumed to possess large air force, long range artillery, tactical rocket systems, EW capabilities as well as large mechanized and armor forces, and has capabilities of conducting offensive operations from sea (amphibious) and air (airborne/air assault).

## Ground Forces

The enemy may be able to bring a large number of armored and mechanized formations against the GAF. Despite the aggressor's big superiority over the GAF in numbers of mechanized and armor formations, most likely he would not be able to effectively use this superiority, due to the restrictions imposed by the terrain.

## Direct Fire Weapons

The threat mechanized formations are expected to be highly mobile and maneuverable forces with the ability to bring massive firepower and speed to the battle during the offensive operations. They may seek to identify the opposing defense lines, and quickly concentrate the firepower to overwhelm their opponents. They may also seek to find the gaps inside opposing defenses and try to use their mobility to exploit them, quickly bypass main defense strongpoints, and attack in to the rear key objectives.

## Indirect Fire Weapons Systems (Long Range Artillery/ Tactical Rocket Systems)

To minimize friendly effects on their moving formations, the threat may widely use long-range indirect fire systems to eliminate the strongpoints and break the resistance of the GAF. An aggressor may employ long-range artillery or tactical rocket systems not

only against the tactical formations but against C2 nodes of the GAF as well. It may be able to hit the GAF targets from distances that may be located outside of the range of the GAF long-range artillery systems.

#### Air Power

The enemy will use a large amount of airpower, especially Close Air Support (CAS) from the early phases of invasion. Aggressor also may use strategic aviation capabilities to gain initiative and disrupt the GAF ability to offer an organized resistance. There is a high probability that the enemy will use not only precision air strikes but also wide area bombing of military and civilian targets to break the resistance if encountered by strong and determined opposition from the GAF, if his ground forces failed to achieve quick success on the offensive.

#### Amphibious Operations

Even though the Georgian Black Sea coast has a number of locations, which provide favorable conditions for amphibious sea to land operations, it is less likely that the enemy will be able to employ a large number of marine units against the GAF.

#### Airborne/Air Assault Operations

Possible adversaries of Georgia have capabilities to conduct large Airborne/Air assault Operations, but this ability may be in some degree limited due to the nature of Georgian terrain. Mountainous terrain and lack of landing zones (LZ) will most likely hinder the conduct of large scale airborne/ air assault operations with employment of mechanized units. However, the employment of a limited number of these units in the rear of Georgian formations is highly possible.

## Electronic Warfare (EW)

Recent historical examples showed successful use of electronic warfare capabilities in conjunction with other types of the forces. In 2008, during the Russo-Georgian war, there were attacks from air, sea, and ground, which were also supported by attacks from cyberspace. Russian side actively used this new type of the warfare, cyber-attacks to paralyze Georgian Government structures. It is likely that the enemy will use electronic warfare capabilities to target the GAF C2 nodes.<sup>62</sup>

## Tactics

The enemy will try to use its advantages against the GAF. In order to timely achieve its objectives the enemy will most likely use its superiority in air assets, long-range artillery, EW etc. However, the aggressor cannot achieve its goals without physically seizing critical objectives. Therefore, the enemy's main emphasis will be put on the ground units. The tanks will be the main striking forces of the enemy. Accompanied by IFVs and APCs they will bring the fire and shock to the battle. The enemy will most likely rely on their speed and firepower to seize critical objectives in timely manner. Division size mechanized formations can be expected to be deployed in some areas. During the attack, they may have strong Air and Long Range artillery fire support.

The Georgian terrain allows the deployment of maximum 2-division size mechanized formations at a time in each Area of Operation or direction.<sup>63</sup> Even though

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<sup>62</sup>Ibid., 166.

<sup>63</sup>Headquarters Department of the Army, FM 34-130, *Intelligence Preparation of the Battlefield* (Washington DC: Government Printing Office, July 1994), B-22.



the enemy may have larger amount of troops available, it will not be able to employ them effectively on larger fronts due to the limits imposed by terrain. Even deployment of those division size formations will be highly restricted by terrain in many areas. The mechanized units will be forced to operate along the existing roads and have to canalize in order to go through the choke points, thus becoming vulnerable to the AT weapons systems and artillery fires. Because of this, the enemy will most likely use force reconnaissance to identify the GAF positions and try to destroy them by long-range artillery fires or CAS, try to quickly break the GAF resistance, maintaining own operational tempo. Light infantry formations will be employed most likely in restricted terrain for shaping operations or in supporting efforts. These light infantry units, along with airborne units; will try to divert the GAF units from the main effort.

#### Assumptions

It is not likely that the invader will use WMD against the GAF if conflict breaks out. This is still not likely even if the aggressor suffers high casualties and is at risk of achieving its political, strategic, and operational objectives. There are several reasons for this:

Assuming that to achieve its political goals, the aggressor will need to change the government of Georgia, it must win the peoples hearts and gain their support. This will help the aggressor to minimize resistance and establish control over the state as soon as possible, thus legitimizing its actions. The use of WMD would not help to legitimize its actions.

Furthermore, the use of WMD by a possible aggressor against Georgia is not likely, because it will cause an extremely negative reaction in the region and worldwide,

which could lead to various sanctions from world organizations and other countries, such as the European Union and the USA. Imposed sanctions will not be rational for the invader.

The third reason why aggressor will not use WMD is the fact that aggression against Georgia is most likely to happen by a country that wants to exploit Georgia for its resources or its location. Due to small size of Georgia, the borders are not too far from neighboring countries, so WMD effects may pose risks to the other countries in the region including aggressor. This would allow Georgia to form a coalition against the invader.

#### Neutral

The involvement of other neutral country's militaries in the conflict to stop the aggression is not likely. Several factors lead to these conclusions. First, the international community will need to create a legal basis for involvement, convince their populations of the importance of the involvement, and generate the appropriate military forces to intervene effectively. All these actions require time and finances, which may not be available in a short period. An example of this is the Georgian-Russian conflict of 2008, when the international community was involved politically, but possibility of the military intervention was officially never discussed. Eventually, mostly the diplomatic pressure of world powers on the fighting sides stopped this crisis.<sup>64</sup>

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<sup>64</sup>Ibid., 215-34.

## Economic

### Friendly

Due to its favorable location, on the historic Silk Road, between the Black and Caspian Seas, Georgia has had economic ties with many countries and empires since ancient times.<sup>65</sup>

Table 1. General Information about Georgian Economy

Georgian Lari		2010	2011	2012
GDP	lari	20.8bn	23.6bn	
	US\$	11.7bn	14.0bn	
<i>Per Capita</i>	US\$	2,535	3,042	
Growth	%	6.38	5.55	
Inflation	%	7.1	9.6	
Defense Expenditure	lari	862m		
	US\$	484m		
Defense Budget	lari	667m	667m	647m
	US\$	374m	395m	
FMA (US)	US\$	16.0m	16.0m	
NOTE: US\$1=lari 1.78 1.69				

Source: "Chapter Four: Europe," *The Military Balance* 112, no. 1 (March 2012): 71-182, <http://www.tandfonline.com/loi/tmib20> (accessed November 20, 2012).

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<sup>65</sup>Gahrton, 1-2.

After the fall of the USSR in 1991, during which Georgia had Soviet type command economy, the country had trouble due to economic collapse.<sup>66</sup> The agriculture and industrial systems broke down. The civil war and military conflicts in breakaway regions caused additional problems to Georgia's economy. The ethnic conflicts in South Ossetia and Abkhazia greatly hindered economic development in Georgia.<sup>67</sup> In 2006, Russia's economic embargo over Georgia's products was also great blow to the Georgian economy.<sup>68</sup>

Despite all these hardships, the country was able to find new trading partners in Europe, Middle East and North America and new markets to import its products. Georgia also found alternate sources of energy supply in the region. The Baku-Tbilisi-Ceyhan and the South Caucasus pipelines run through Georgia, which receives income and a portion of gas supplies from Azerbaijan as a transit fee. A few years ago, Georgia depended on the supply of the natural gas and electricity from Russia, by investing in the hydroelectricity sector Georgia has become an exporter of electricity.<sup>69</sup>

In recent years, new Georgian government made successful efforts in implementation of the various reforms, which help the country to transition to a free market economy.<sup>70</sup>

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<sup>66</sup>Ibid., 2.71-2.72.

<sup>67</sup>Asmus, 71-2.

<sup>68</sup>Ibid., 2.

<sup>69</sup>Justin Keay, "Competition in the Caucasus: Three's Company," *Global Finance*, February 2011, <http://www.gfmag.com/archives/134-february-2011/11056-regional-report-the-caucasus.html#axzz2BgGwV2Cn> (accessed November 8, 2012).

<sup>70</sup>Ibid.

As a result of new reforms, Georgia's economy has stabilized and begun to grow. The government has shifted its efforts toward the energy, tourism, and agricultural sector.

EU food safety standards have been established, which will facilitate the growth of the export of the agricultural products to the European and American markets.<sup>71</sup>

As domestic credit and external demand recovered, output increased in most sectors.

The central banks' efforts, which mainly targeted inflation, have resulted in strengthening the financial stability, analytical capacity to support inflation targeting, and improved consumer protection. Some of the reforms in the economic sector included tax collection, which resulted in the increase of budget revenues.<sup>72</sup>

In recent years, Georgia has shown most dramatic improvement in fighting corruption. By introducing new reforms, Government took effective steps to fight the corruption and country received high evaluation from World Bank.<sup>73</sup> In 2010, Georgia was nominated by the World Bank as the number one economic reformer in the world and the easiest place to do business. Some of other statistics about Georgian Economy are:

1. Overall ranking "Best countries for doing business": 12 out of 183 countries (2010). Subcategories: Starting a business - 8 out of 183 countries (2009); Registering property - 2 out of 183 countries; Paying Taxes - 61 out of 183

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<sup>71</sup>European Bank for Reconstruction and Development, "Georgia," <http://www.ebrd.com/pages/country/georgia.shtml> (accessed November 8, 2012).

<sup>72</sup>Central Intelligence Agency.

<sup>73</sup>Ibid.

countries; Getting credit -15 out of 183 countries; Protecting investors - 20 out of 183 countries; Trading across border - 35 out of 183 countries; Enforcing Contracts- 41 out of 183 countries.<sup>74</sup>

2. Gross Domestic Product - GDP US\$ 15.984 billion (2010 estimate).<sup>75</sup>

3. GDP - composition by sector: Agriculture: 10 percent; Industry: 29.4 percent; Services: 60.6 percent (2011).<sup>76</sup>

4. Exports US \$2.29 billion, 34.8 percent of GDP (2010); Georgia's main export products are wine and agricultural products scrap metal, mineral water, ores, vehicles, fruits and nuts. Wine making is a very old tradition in Georgia.

Together with agriculture, tourism is a major part of the economic sector. The tourism industry in Georgia is increasing in recent years, and represents one of the greatest sectors in the Georgian economy. Main Export Partners- Turkey 13 percent, US 11.2 percent, Azerbaijan 6.3 percent, UK 5.4 percent, Bulgaria 5.1 percent, Ukraine 5 percent, Armenia 4.8 percent, Turkmenistan 4.5 percent, Canada 4.2 percent (2007).<sup>77</sup>

5. Import US \$7.304 billion (2008 estimate); Georgia greatly relies on the import of natural resources such as natural gas, oil products. Country also imports machinery and parts, grain and other foods, pharmaceuticals. Main Import

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<sup>74</sup>Global Finance, "Country Economic Reports: Georgia," <http://www.gfmag.com/gdp-data-country-reports/269-georgia-gdp-country-report.html#axzz26sOKKNNL> (accessed November 5, 2012).

<sup>75</sup>Ibid.

<sup>76</sup>Ibid.

<sup>77</sup>Ibid.

Partners are: Turkey 14 percent, Russia 12.3 percent, Ukraine 8.5 percent, Azerbaijan 7.3 percent, Germany 6.8 percent, US 5 percent, Bulgaria 4.6 percent (2007).<sup>78</sup>

6. Real GDP growth rate: In 2007, real GDP growth rate of Georgia reached 12 percent, making Georgia one of the fastest growing economies in Eastern Europe.<sup>79</sup>

Table 2. Real GDP Growth in Georgia 2001-2012

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
4.7%	5.5%	11.1%	5.9%	9.6%	9.4%	12.3%	2.3%	- 3.8%	6.3%	7%	6%

*Source:* Global Finance, “Country Economic Reports: Georgia,” <http://www.gfmag.com/gdp-data-country-reports/269-georgia-gdp-country-report.html#axzz26sOKKNNL> (accessed November 5, 2012).

With a growing Georgian economy, there has also been progress in the Defense Manufacturing sector. In recent years, Georgia produced a number of military fighting vehicles, such as IFV, APC, and MRLS as well as UAVs and other military products.<sup>80</sup>

Military expenditure of the Georgia is 1.9 percent of GDP.<sup>81</sup>

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<sup>78</sup>Ibid.

<sup>79</sup>Ibid.

<sup>80</sup>Corso.

<sup>81</sup>Central Intelligence Agency.

Despite the progress made in recent years there are many challenges that Georgia faces in this area. Key challenges are:

1. Attraction of private investment during the world economic crisis.
2. The low rate of long-term economic growth is a challenge to Georgia's national security.<sup>82</sup> Further reforms are required in the financial sector to ensure continued recovery from the economic crisis and stable growth in the longer run.
3. The overall deficit remains high and public debt has yet to stabilize.<sup>83</sup>
4. Due to the lack of energy resources, Georgia greatly depends on the import of those resources. Strengthening energy independence is one of the priorities for the national security of Georgia. Therefore, the diversification of energy sources, the development of clean energy sources, and the creation of the appropriate energy infrastructure is critical for Georgian economic development. The country has a great amount of hydropower resources, which has been successfully developed in recent years.
5. Georgia's economy traditionally depended on the agriculture and during the later years economy is becoming more dependent on the services and moving away from agricultural sector. Lately government stressed the importance of agriculture in the Georgian economy and showed the desire to make efforts to develop this sector.

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<sup>82</sup>Ministry of Defense of Georgia, *National Military Strategy of Georgia*.

<sup>83</sup>European Bank for Reconstruction and Development.



### Opposing

Because it is anticipated that the likely aggressor is much larger country than Georgia, naturally it will have greater economic capabilities than Georgia. Therefore, it is assumed that aggressor will not be limited in economic and energy resources against Georgia. On the other hand country X will try to achieve its objectives in the war with Georgia with less resources as possible, because the large expenses may put under the question the efficiency of the military actions. Beside this, aggressor will try to minimize the impact of these military actions on the relationships, including economic, with foreign countries and therefore will avoid making the actions that can possibly threaten with economic sanctions.

### Neutral

In recent years, Georgia has been developing into an international transportation corridor from central Asia and Middle East to Europe. The economic interest of the western countries toward Georgia is growing.<sup>84</sup> U.S. is one of the biggest partners of Georgia. Since 1991, U.S. has provided Georgia approximately \$1.7 billion in assistance. In September 2005, Georgia signed agreement with Millennium Challenge Corporation according to which Georgia received \$295.3m to improve roads, pipelines, water supply systems and create small businesses in the country.<sup>85</sup>

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<sup>84</sup>Gahrton, 6-10.

<sup>85</sup>Office of United States Trade Representative, Executive Office of the President, "United States and Georgia Sign Trade and Investment Framework Agreement," June 2007, <http://www.ustr.gov/about-us/press-office/press-releases/archives/2007/june/united-states-and-georgia-sign-trade-and-inv> (accessed November 9, 2012).

## Social

### General Information

According to the July 2012 estimate, Population of Georgia is 4,570,934 (country comparison to the world: 122). Fifty-three percent of total population lives in urban areas.<sup>86</sup>

Table 3. Age Structure in Georgia

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	8.4%	3.5%	4.1%	3.7%	21.7%	6.4%
Female	7.3%	3.3%	4.0%	3.9%	24.2%	9.7%

Source: “Chapter Four: Europe,” *The Military Balance* 112, no. 1 (March 2012): 71-182, <http://www.tandfonline.com/loi/tmib20> (accessed November 20, 2012).

Georgia is multiethnic country. There are various ethnic people living in Georgia. Georgians constitute 83.8 percent of total population, Azeri - 6.5 percent, Armenians - 5.7 percent, Russians - 1.5 percent, other - 2.5 percent.<sup>87</sup>

Age structure of the population is: 0-14 years: 15.6 percent (male 383,856/female 333,617) 15-64 years: 68.3 percent (male 1,511,844/female 1,620,727); 65 years and over: 16 percent (male 293,143/female 442,687).<sup>88</sup>

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<sup>86</sup>Central Intelligence Agency.

<sup>87</sup>Ibid.

<sup>88</sup>Ibid.

Official language in Georgia is Georgian Language. It is unique language and is not related to any other languages. Seventy-one percent of the population speaks Georgian. Other languages spoken are Russian 9 percent, Armenian 7 percent, Azeri 6 percent, other 7 percent.<sup>89</sup>

Main Religions in Georgia are Orthodox Christian (official) 83.9 percent, Muslim 9.9 percent, Armenian-Gregorian 3.9 percent, Catholic 0.8 percent, other 0.8 percent, none 0.7 percent.<sup>90</sup>

Comparing to the most of its neighbors Georgia also has limited human resources. Population of Georgia is approximately 4,6m. Mandatory service ages 18-34 years and service period in the armed forces is 18 months. Manpower available for military service: males age 16-49: 1,080,840 females age 16-49: 1,122,031. Manpower fit for military service: males age 16-49: 893,003 females age 16-49: 931,683 Manpower reaching significant age annually: male: 29,723 female: 27,242.

#### Ethnic Conflicts

As a result of Ethnic conflicts in Abkhazia and South Ossetia after Break of Soviet Union, Georgia received approximately 250 000 refugees from both regions. These conflicts currently remain unresolved and greatly hindering development of Georgia.<sup>91</sup>

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<sup>89</sup>Ibid.

<sup>90</sup>Ibid.

<sup>91</sup>Ibid.

## Infrastructure

### Roads/Railroads

Roads: There are total 20329 km of the roads in Georgia. 19 123 km. of these roads are paved (Concrete, Asphalt, and Gravel) and 1206 km are unpaved.<sup>92</sup> Majority of the main and international roads have been upgraded in recent years, majority of the secondary and local roads are still in poor condition.<sup>93</sup> There are several running projects to upgrade the Georgian Highway System that runs from West, from Black sea to the East up to the Border with Azerbaijan, and further to the Caspian Sea and will make shortest route from Central Asia to Europe.<sup>94</sup> This highway is one of the most important terrain features in Georgia. This highway has the critical importance especially for Georgia, because it serves as supply route for the country and as main connection with the outside world for East Georgia. It represents a high-speed mobility corridor and during the war may serve as a line of communication to either side.

Railroads: Georgian Railways system is main artery that links the country with most of its neighboring states. The total length of Georgian Railroad is 2344.2 km. The

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<sup>92</sup>Ibid.

<sup>93</sup>Encyclopedia of the Nations, “Georgia-Infrastructure, Power, and Communications,” <http://www.nationsencyclopedia.com/economies/Europe/Georgia-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html> (accessed November 11, 2012).

<sup>94</sup>The World Bank, “Georgia: Building Better Roads–More Trucking Means More Jobs, More Businesses,” September 10, 2009, <http://www.worldbank.org/en/news/2009/09/10/building-better-roads-more-trucking-means-more-jobs-more-businesses> (accessed November 11, 2012).

Operational length-1326, 4km.<sup>95</sup> Railroad links Georgia with: Azerbaijan to the East, Armenia to the south and Russia to the North (Currently is nonoperational due to the conflict with Abkhazia). Railways serve many Georgian cities such as Poti, Batumi, Kutaisi, Akhaltsikhe, Khashuri, Telavi, and Tbilisi. The new projects are underway to connect Georgian Railway system to Turkey and Europe.<sup>96</sup>

### Seaports/Airports

#### Airports

Georgia had number of airports (Both military and civilian) during the Soviet Union. After the collapse of the Soviet Union, many of those airports were not properly maintained and were in poor condition. In recent years, most of those airports have been repaired and functional. Some of them became international level airports and can support international flights.

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<sup>95</sup>Georgian Railway, “Statistics,” [http://www.railway.ge/?web=3&action=page&p\\_id=89&lang=eng](http://www.railway.ge/?web=3&action=page&p_id=89&lang=eng) (accessed November 11, 2012).

<sup>96</sup>Turkish Weekly, “Railway between Azerbaijan, Georgia and Turkey to Be Commissioned in 2013,” April 16, 2012, <http://www.turkishweekly.net/news/134273/railway-between-azerbaijan-georgia-and-turkey-to-be-commissioned-in-2013-.html> (accessed November 11, 2012).

Table 4. Data about Georgian Airports

#	Characteristics	Number of the:	
		Airports with paved runways	Airports with unpaved runways
1	Total	18	4
2	Over 3,047 m;	1	
3	2,438 - 3,047 m	7	
4	1,524 - 2,437 m	3	1
5	914 to 1,523 m	5	2
6	Under 914 m	2	1

*Source:* Central Intelligence Agency, The World Factbook, “Middle East: Georgia,” <https://www.cia.gov/library/publications/the-world-factbook/geos/gg.html> (accessed November 8, 2012).

### Seaports

Batumi and Poti ports on the Black Sea are the main seaports for transporting goods from and in to the country. These ports are playing strategic role in the economic development of the country. Energy resources from the Caspian Sea and Central Asian regions are transported to the Georgia’s Black Sea ports and further to the West in to the Europe.<sup>97</sup>

### Other Key Infrastructure

Roki tunnel is critical passage through Greater Caucas Mountains that connects Russia with Georgia, specifically in the area of breakaway region of South Ossetia. This

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<sup>97</sup>Ministry of Defense of Georgia, *National Security Concept of Georgia*.

tunnel was used by Russian armed forces during 2008 Russo-Georgian war to deploy their forces in to the Georgian territory.<sup>98</sup>

Pipelines Total: Gas 1,596 km; Oil 1,258 km (2010).<sup>99</sup> There are also two major interstate pipelines running through Georgia. One of them is the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, which is 1768km in total length (443km in Azerbaijan, 249km in Georgia, and 1,076km in Turkey). The pipeline throughput capacity is one million barrels of oil per day.<sup>100</sup> Another pipeline is Baku-Tbilisi-Erzurum pipeline, which has the capacity to pump gas up to 20 billion cubic meters a year.<sup>101</sup> These pipelines transport crude oil and natural gas from Central Asia and Azerbaijan to Turkey and further to the Europe.

### Informational

#### Friendly

There are several media agencies, both press and television, that can provide relatively accurate information to the population. There are cases of accusations of government influencing media, by NGOs and journalists. Some of the TV agencies are blamed to be as a pro-government also. Nevertheless, several media agencies are strictly pro-opposition too.

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<sup>98</sup>Asmus, 165.

<sup>99</sup>Central Intelligence Agency.

<sup>100</sup>SOCAR, "Baku-Tbilisi-Erzurum Gas Pipeline," <http://new.socar.az/socar/en/activities/transportation/baku-tbilisi-erzurum-gas-pipeline> (accessed November 8, 2012).

<sup>101</sup>BP, "Baku-Tbilisi-Ceyhan Pipeline: Spanning three countries from the Caspian Sea to the Mediterranean coast," <http://www.bp.com/sectiongenericarticle.do?categoryId=9006669&contentId=7015093> (accessed December 5, 2012).

The informational war may play decisive role in conflict. It is equally important for both sides, Georgia and Country X to win the informational battle at the international level. Therefore, cooperation with media agencies, both local and international should be well considered by Georgian Authorities. For example, during the 2008 war with Russia Georgia was able to achieve some success in the informational war. As a result, international community was able to react timely and decisively. Leaders from several European countries, as well, high-ranking diplomats from United States arrived to Tbilisi to support Georgia and facilitate ceasefire.<sup>102</sup>

### Opposing

It is assumed that Opposing side can use broad informational propaganda against Georgia, not only during, but also before the aggression. The aggressor's informational campaign may be targeting different audiences.

First target of the informational campaign may be the international organizations and its aim may be legitimatization of its own actions by the aggressor.

Second target audience may be Georgian people and may be aimed toward discrediting the government of Georgia. The aggressor's objectives may be the reduction of the support of the people to the government and degrading integrity of the population, government, and military.

Third target audience for propaganda may become ethnic minorities of Georgia and its objective may be stir up the hatred between the people to disrupt any joint

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<sup>102</sup>Asmus, 189-215.



resistance of the Government, Military and Population. This can divert some of the resources from the main effort.

### Neutral

In case of the conflict the proper coverage of the events by international media agencies, may have critical effects on Georgia and its people, in terms of gaining international support.

### Physical Environment/Terrain

#### Land

#### General Description

Land Area: Total-69,700 km<sup>2</sup> (26,911 m<sup>2</sup>); Land-69,700 km<sup>2</sup> (26,911 m<sup>2</sup>);  
Water 0 km<sup>2</sup>

#### Territorial Boundaries

Land - 1,461 km. (Armenia 164, Azerbaijan 322, Russia 723, and Turkey 252)

Coastline: 310 km (192.63 miles)

Land Divisions: Georgia is divided into 9 regions, 65 districts, 1 city, and 2

Autonomous Republics

Horizontal Width: 335.64 km (208.56 miles) from North-West to Southeast.

Vertical Length: 111.97 km (69.58 miles) from South to North (Widest section).

Highest Point: Mt. Shkhara 5,201 m.

Lowest Point: Black Sea 0 m.



Figure 2. Topography of the Georgia

Source: BC Outfitters Consultant, [http://www.bcoutfittersconsultant.com/Print.asp?wtg=R\\_CS](http://www.bcoutfittersconsultant.com/Print.asp?wtg=R_CS) (accessed November 8, 2012).

### Obstacles

Georgia is very mountainous country. Country's territories 85 percent is covered by high mountains (see figure 2).<sup>103</sup> Its territorial boundaries mainly run along the high mountain ridges. Mountainous terrain limits the traffic-ability of the vehicles and fighting vehicles to the existing road network. Deployment of the large mechanized formations by enemy will be greatly restricted by mountain ridges, narrow valleys, and deep river canyons.

<sup>103</sup>Encyclopedia of the Nations.

From the North the country is bordered by Great Caucasus Mountain Ridge, where some of the great peaks exceed the 5000 meters.

On the South, Georgia's territorial borders also mainly run along the high mountain ridges of the Lesser Caucasus Mountains. Lesser Caucasus Mountain Ridge mainly runs parallel to the Greater Caucasus Ridge. The highest mountains of this ridge rise more than 3,000 meters (9,840 ft.) above sea level.<sup>104</sup>

From the West, Georgia is bordered by the Black Sea. Coastline constitutes 310 km. of total territorial borders of Georgia, approximately 180 km. of which is part of Abkhazian Autonomous Republic, currently occupied by Russia.<sup>105</sup> The coastline in the Northern and Southern parts is mostly mountainous with narrow strips of flat ground between the sea and Mountains. In the center, coastline is more flat and lowland stretches for several kilometers deep in to the land (Kolkhida Lowland).

The Kolkhida lowland has rough triangle shape (See figure 2) and stretches from Town of Poti on the Black sea coast to East for approximately 100 km. deep in to the land, to Town of Grigoleti. It is limited by mountain ridges of Greater and Lesser Caucasus Mountains from North and South. The west side of the Triangle is also approximately 80 km. wide and runs along the Black Sea coast from town of Kobulety to the North, up to Gali and Ochamchira districts of Abkhazia (see figure 2).

This lowland provides good mobility for Mechanized and Tank units. Even though many rivers cross the area, mainly from North to South they do not represent big obstacles for enemy units. Multiple bridges that are crossing these rivers can support

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<sup>104</sup>Ibid.

<sup>105</sup>Machaidze.

movement of medium tanks. There are many fording sites as well, which can be used by enemy to cross those rivers in case the bridges are destroyed.

The Likhi ridge runs from north to south, connects Greater and Lesser Caucasus ridges with each other and divides Georgia approximately on two halves, Western and Eastern. Area can also greatly degrade the mobility of the mechanized formations.

In the easternmost part of Georgia, terrain is relatively open and less mountainous. Small mountain ridges without forests run generally from East to West. Here too Georgian territorial boundaries are defined by natural terrain. The boundaries run along the rivers of Alazani and Iori, which generally do not constitute the great obstacle for enemy, but in some places with combination with the mountain ridges, they can limit the number of the mobility corridors.

The central parts of Eastern Georgia are more open and flat and provide good mobility for battalion and brigade size Mechanized and Tank formations. Most of the major towns of Georgia are located in these lowland areas along the East-West highway, and can constitute an obstacle for the attacking mechanized formations.

The two largest rivers in Georgia are Kura and Rioni. Rioni River flows in Western Georgia. It flows from North, Greater Caucasus Mountains to South and then turns to the West. In some places, the river's steep banks provide good natural obstacles for the offensive units. The Kura River flows from Northeast Turkey to the north in Georgia, then turns to the East, crosses Southern part of Georgia, and flows to the Azerbaijan. The river mainly flows in the restricted terrain and its steep banks provide great obstacle for mechanized formations.

### Mobility Corridors/Avenues of Approach (AA)

Because of its strategic location on the east side of the Black Sea and to the south of the Greater Caucasus Mountains Georgia controls much of the mountain passes through them.<sup>106</sup> Due to the very restricted terrain all along the Georgia's international borders, the mobility of the Mechanized and Tank formations into Georgia is restricted and limited to the existing roads. There are limited numbers of mobility corridors that hypothetically may be used by enemy as avenues of approach. On the north, due to the limited amount of the passes through the Greater Caucasus Ridge, there are four mobility corridors only, which can support movement or deployment of the mechanized units.



Figure 3. Mobility Corridors/Possible Avenues of Approach by Units Size

Source: Wikimedia Commons, [http://commons.wikimedia.org/wiki/File:Caucasus\\_topo\\_map-blank.svg](http://commons.wikimedia.org/wiki/File:Caucasus_topo_map-blank.svg) (accessed November 8, 2012).

<sup>106</sup>Central Intelligence Agency.

Similarly, to the Northern Mountains, terrain along the Southern border of Georgia provides limited amount of mobility corridors for mechanized formations. There are limited amounts of mobility corridors, which allow passage of mechanized units, from each neighboring countries from the south.

Geographically all the ground mobility corridors can be divided on the Northern and Southern corridors. Operationally these mobility corridors can be divided on Western and Eastern theatres, which are divided by Likhi range in the center of Georgia.

In the Western Operational Theatre, there are two mobility corridors for the mechanized formations, one on the north and one on the south.

The mobility corridor #1: The first mobility corridor is the Northwestern corridor, which runs along the Black Sea coast, from Russia, through the occupied Georgian region of Abkhazia into the Samegrelo Region of Georgia. At the border of the Abkhazia with rest of the Georgia, this mobility corridor is approximately 20 km. wide, contains several roads, and is able to support deployment of the 1-division size formation.<sup>107</sup>

The mobility corridor #2: This corridor is located in the South-West part of Georgia. Starts at the Georgian-Turkish border and runs along the Black Sea coast to the north, toward the Kolkhida lowland. It runs through restricted terrain, with multiple narrow passes and chokepoints. It is limited from the East by the high mountain ridges and from the West by the Black sea. This mobility corridor can only support deployment of battalion and in some places brigade size mechanized formations.

Both mobility corridors of the western operational theatre open in to the Kolkhida Lowland where terrain becomes more open and flat, have average width about 30 km.

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<sup>107</sup>Headquarters Department of the Army, FM 34-130, B 22.

and can support the deployment of 1-1.5 mechanized division size elements (see figure 3).<sup>108</sup> The area may also represent the zone of attack for two division size formations.

In the Eastern Operational theatre, there are three mobility corridors on the north and two mobility corridors on the south.

The mobility corridor #3: This mobility corridor is in the North part of Eastern Georgia. It runs from Russian border through another occupied Georgian region of South Ossetia. It starts at the Rocky tunnel, at the border of Georgia with Russia, runs through the narrow mountain passes of the Caucasus Mountains and opens at the flat terrain south of Tskhinvali. At the beginning of this mobility corridor, the Mechanized units can only move along the limited roads, but Southern part of this mobility corridor can support deployment of one or two division size formations.<sup>109</sup>

The mobility corridor #4: The fourth mobility corridor also runs from Russian border to south and is located approximately 70 km. east of the third mobility corridor (see figure 3). Entire mobility corridor represents only one road, which runs from town of Stepantsminda, at the Russian-Georgian border, through the narrow mountain valleys, and ends approximately 10 km North-East of Tbilisi, the capitol city of Georgia (see figure 3). In this mobility corridor, there is extremely restricted terrain, and does not allow deployment of any mechanized formations and can be used by marching columns only.

The mobility corridor #5: This mobility corridor is located in the Northeast part of Georgia and runs from East to West, along the Southern edge of the Greater Caucasus

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<sup>108</sup>Ibid.

<sup>109</sup>Ibid.

ridge from Azerbaijan to Georgia. From the south, the several mountain ridges also limit this mobility corridor. This mobility corridor is approximately 20 km wide and can support deployment of one division size formations (see figure 3).<sup>110</sup>

The mobility corridor #6: This mobility corridor is located south of Tbilisi, contains two main roads from Azerbaijan and Armenia. It runs mainly on the open terrain, has the width approximately 30 km. and can support deployment of 1 -1, 5 division size mechanized formations (see figure 2).<sup>111</sup>

The mobility corridor #7: The mobility corridor #7 is located in south part of Georgia, in the region of Samtskhe-Javakheti. It also contains two main roads from Armenia and turkey. These roads connect at the southern town of Akhaltsikhe approximately 15 km from the border between Georgia and Turkey (see figure 3). The terrain in the mobility corridor is severely restricted and does not provide good mobility for the mechanized formations. Roads in the area run through deep mountain canyons and there are many chokepoints along the roads. Some sectors of the mobility corridor can support deployment of one or two-battalion size mechanized formations simultaneously.

Beside these mechanized mobility corridors, there are several mountain passes that can be used by small light enemy formations mainly for shaping operations, such as diversion, deep operations, and disruption of the lines of communications.

In addition, the territories of the breakaway regions of the Abkhazia and the South Ossetia, which are outside of the control of the Georgian Government, can serve as a bridgehead and may be used for staging areas of large military forces.

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<sup>110</sup>Ibid.

<sup>111</sup>Ibid.



### Key Terrain

There are many areas in each mobility corridor that can be identified as key terrain, according to the specific operational plans. These areas such as the chokepoints within the mobility corridors can be exploited by the defending side to produce maximum effects on the attacking enemy with fewer resources. The dominating mountaintops may serve as good locations for the observation posts. These high points may be also used for coordination of indirect fire on the enemy moving formations and intelligence gathering.

### Observation/Fields of Fire

Forests and brush cover more than one third of Georgia's territory. Mountain ridges of west Georgia as well as flat area of Kolkhida Lowland almost entirely are covered by forests. In conjunction with mountainous terrain, it greatly limits observation and ability to conduct effective fires from tanks and AT weapon systems on the maximum ranges. On the other hand, observation is better conducted from the high grounds to the lowlands. The area gives more opportunities to the defending side to better exploit the advantages of the terrain over the mounted formations of the attacking forces. By appropriate selection of the areas of engagements, ambush sites, and counterattack routes the smaller defending force may achieve the parity or even superiority over numerically bigger attacking forces.

Absence of forests on the hills of the East and Southeast parts of Georgia provides better observation, but here too it is still limited by restricted terrain. In some places of eastern, Georgia, such as Kartli Plain, the River valleys of Alazani and Iori terrain is more open with very small amount of vegetation and provides good observation in

maximum distances. The larger mechanized and tank forces will have advantage over smaller forces in this terrain.

#### Cover and Concealment

Restricted terrain and overhead cover provided by thick forests provide good cover and concealment to both sides in the mountains. In the open areas of west and east Georgia, terrain does not offer good cover and concealment to either side. In this case, the GAF may have a big advantage over attacker, if the engineer survivability measures are taken in advance.

#### Air

Because of small size in terms of territory, the airspace of Georgia is also small. This fact gives the likely aggressor advantage to establish the air superiority over Georgian airspace. On the other hand, defense of the airspace by the ADA systems is relatively easy and medium range ADA systems can play strategic roles in the control of the Air domain.

#### Maritime

Georgia does not possess big Navy assets, and large countries with a strong Navy can easily overwhelm the small Georgian coast guard. In this case, Georgia will face the threat of intervention by enemy military forces from sea, and may be left without sea lines of communications. In case of control of those Lines of Communication by the enemy, Georgia will be denied of external support, in terms of humanitarian and military assistance, food, and medical supplies.

The domination on the sea also gives advantage to the opponent in terms of inserting the forces into Georgian land from the Sea by conducting amphibious operations. There are the some locations along the Black Sea coast of Georgia that support the conduct of amphibious operations.

### Space

Georgia does not possess any space capabilities and may only rely on the support from third parties. The support may be in forms of provision of the strategic information.

It can be assumed that Country X may possess a space capability and can use this advantage in the course of the conflict.

### Cyberspace

Country X most probably will have capabilities to dominate in the cyberspace and will conduct attacks on the Georgian information infrastructure and against the GAF C2 nodes simultaneously with attacks in other domains. The GAF does not possess enough capabilities to defend from these kinds of threats. It relies on the external support to counter the cyber-attacks.

### Time

#### Friendly

Time will be critical factor for Georgia in case of intervention. The GAF actions should be more oriented on winning the time to give the government ability to use other sources of national power to defend the country's interests.

### Opposing

On the opposite side, time is key factor for aggressor also, but in different aspects. In this case, the aggressor's actions will most likely be oriented on quick and decisive victories over the GAF. Country X may enjoy superiority over Georgia in many different areas, such as economic, military, and informational capabilities, but one factor that will most likely be limited is time. Due to the nature of the aggressor's actions and the key political objectives will have to be addressed quickly to establish control over the country. The longer the conflict lasts, the more likely the intervention from international organizations and countries will increase. The international organizations such as North Atlantic Treaty Organization (NATO) or United Nations (UN) may be able to intervene eventually diplomatically, economically or by other means and stop the aggression. This will reduce the aggressor's chances to achieve its political goals.

### Neutral

The international organizations most likely also will require some time to make decisions and come up with means to influence the aggressor.

#### Short Summary of current OE:

1. Political: Georgian politics in recent years is oriented towards the close cooperation with Western countries and organizations. Georgia is actively seeking the integration in to the Western international organizations in order to ensure its security.

2. Military: Georgia has smallest military in the region. Due to the limited resources, it cannot establish and maintain large standing army, which would ensure the defense of the country's sovereignty.

3. Economic: Despite the recent years Georgia had dramatic increase in the economy, the country still faces lot of challenges. Unemployment rate remains high in Georgia, 16.3percent (2010 estimate)<sup>112</sup>

4. Social: Existing conflicts with breakaway regions of Abkhazia and South Ossetia are greatly hindering country's economic development. Georgia is trying to find the peaceful solutions of those problems and facilitate the return of the refugees back to their regions.

5. Informational: The informational war will be largely used by both sides during the conflict. It greatly can influence outcome of the conflict. Therefore, both sides will actively try to achieve superiority in this sphere. The main target for the informational campaigns will be international community. The international media agencies also can play great role in the outcome of the conflict.

6. Infrastructure: Georgia is developing in to the economic corridor between East and West. Some of the critical infrastructure is oil and gas pipelines from Caspian Sea to the black sea coast, Turkey and. further to the Europe. The international highway and railroad system is part of critical infrastructure. These systems connect Georgia with most of its neighbors and will play important role in supply of the country during the conflict.

7. Physical terrain. Land: Georgia is very mountainous country with very restricted terrain, which in case of proper use can give great advantage to the defender.

Airspace: The small size of the country makes it easier for defender to control the airspace by medium range ADA systems. This same factor although gives the advantage

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<sup>112</sup>Central Intelligence Agency.

to the attacker also. Small size of the terrain enables invader to easier concentrate its assets against the key targets throughout the country.

Maritime: Lowlands and flat and open terrain along the Black Sea Coast of Georgia gives the invader the opportunity to conduct large amphibious landing operations to insert the forces in to the Georgian terrain avoiding the narrow mobility corridors along the Georgia's international land borders.

9. Time: In case of foreign military intervention, time is critical factor for both sides. For Georgia, it is critical to gain the time in order to facilitate involvement of the international organizations. For an aggressor, time will be critical also to achieve success in the war. Seizing the critical objectives and establishing the control over government in shortest possible time will enable him to mitigate chances of external involvement.

### What is Desired Endstate for the GAF in Case of Intervention?

#### Description of Opposing End State and Objectives

No matter what the political objectives of Country X, if the military intervenes in the Georgian territory, whether they have territorial, geopolitical, economical, or other interests, one of the most critical conditions for aggressor will be justification of his own actions before international community and their ability to depict the invasion as legitimate. Intervening in other countries' internal affairs and territory, means neglecting the sovereignty of that country, and represents the violation of the principles of international law.<sup>113</sup> In today's world it is not easy to occupy whole or parts of other

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<sup>113</sup>W. Michael, Reisman, "Sovereignty and Human Rights in Contemporary International Law," Yale Law School, 1-1-1990, [http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1866&context=fss\\_papers&seiredir=1&referer=http%3A%2F%2Fwww.google.com%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3Dviolation%2Bof%2Bt](http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1866&context=fss_papers&seiredir=1&referer=http%3A%2F%2Fwww.google.com%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3Dviolation%2Bof%2Bt)

country's territory, even as small as Georgia, without strong legitimate reasons, in the condition of determined political and military resistance. This is especially difficult when people, military, and government are united against the aggressor. In order to achieve these political objectives, one of the key factors for Country X will be establishment of control over the Georgian Government as quickly as possible to make use of force look legitimate. Therefore, to establish the control over Government of Georgia, a possible aggressor will need to defeat the resistance of Georgian military first. It is very critical for Country X because even in case of success of military campaign, political objectives still may not be achieved, because Georgian government can continue resist politically and it may gain strong international support.

Strategic End- State: Desired strategic end-state for the aggressor in Georgia most likely will be the control over the Georgian Government.

Strategic Objectives: Minimize international support to Georgia.

Strategy: Use large military forces to quickly overwhelm the GAF and through the military pressure break their will to resist. Leverage existing ethnic conflicts in Georgian Breakaway regions to destabilize situation in country, discredit, and pressure Georgian government.

Military End-State: Resistance of the GAF is quickly defeated.

Military Objectives: Seize capitol city of Georgia, Tbilisi or other key objectives to isolate country and break its resistance.

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he%2Bsovereignty%26source%3Dweb%26cd%3D1%26ved%3D0CCMQFjAA%26url%3Dhttp%253A%252F%252Fdigitalcommons.law.yale.edu%252Fcgi%252Fviewcontent.cgi%253Farticle%253D1866%2526context%253Dfss\_papers%26ei%3DsrlAUMzNHKOj2QXx4IDABw%26usg%3DAFQjCNHayhA0rd6DU0Tc5u0CRiZYBCNPBw#search=%22violation%20sovereignty%22/ (accessed December 6, 2012).

Effects: the GAF is no longer able to continue organized resistance.

Based on the aggressor estimated strategic and military end-states and objectives, two courses of action may be anticipated:

COA 1 (Most dangerous); MDECOA will be large-scale military intervention by ground forces, from multiple directions, supported by deep air attacks. Operational goals of likely invader in this scenario may be seizure of the capital city of Georgia, using shortest possible routes toward it. Accomplishment of this task will enable them to achieve strategic objectives, quickly gaining the control over government and the people.

Enemy forces in this COA will rely on operational tempo, enabled by mobility and firepower of the mechanized and armor units. By massing the bulk of his mechanized forces against Tbilisi, he will try to isolate and seize the objective. Beside the intervention in the east part of Georgia, where capital city is located, enemy may also conduct operations in west Georgia. These operations will be mainly shaping operations and can be oriented on the fractioning the GAF resistance efforts and cutting the external supply lines from west to east.

COA 2 (Most likely); MLECOA will be limited attacks on and seizure of multiple key objectives in Georgian territory aimed to neutralize the GAF and isolate the capital city from outer world. After this condition is achieved, through diplomatic, economic, and military pressure force the government of Georgia to resign or compel aggressors will.

In this scenario enemy will conduct offensives along two or more avenues of approach, defeat the GAF by actively using Airpower, and seize the critical objectives that will enable him to cut Tbilisi from supplies and external support. This COA may



provide enemy less operational tempo and give more time to the Georgian government and international community to react.

### Centers of Gravity

Friendly

#### Strategic COGs

1. COG: Legitimate Government of Georgia.
2. Critical Capabilities:
  - A. Information Operations to gain the support of the population and international community.
  - B. Create and maintain the Political, Military, and Social Unity within the country;
  - C. Development of National Military Industrial capabilities.
3. Critical Vulnerabilities:
  - A. Discontent of some ethnic minorities may be resulted by Enemy propaganda machine;
  - B. Damage or isolation of the critical infrastructure such as main highways and railroads, APODS/SPODS, Tele/Radio communication stations may paralyze the Country Economically and Informational.
  - C. Breakaway regions of Abkhazia and South Ossetia territories may serve as the bridgehead for enemy troops and used for disruption of the GAF operations.

4. Critical requirements:

- A. Effective mobilization of the National Resources: Economic, Manpower and Natural.
- B. Effective employment of the sources of National power: Diplomatic, Informational, Economic, and Military;
- C. Establish and Maintain close working relationship with neutral powers and world organizations with the objective to gain their maximum support.

Operational COGs

1. COG: Georgian Armed forces

2. Critical Capabilities:

- A. Support of Georgian government and Population;
- B. Security of the Key Infrastructure;
- C. Possibility to preposition the weapon systems and prearrangement of the engagement areas gives the advantage to the GAF;
- D. Effective Control of the land Domain.

3. Critical Vulnerabilities:

- A. Cut of the LOCs by enemy;
- B. Limited Weapons and Ammunition supplies;
- C. Inability to cover the multiple directions simultaneously;
- D. Effective control of the Air, Maritime, and Cyberspace Domains.

4. Critical Requirements:

- A. Maintenance of the access to the LOCs.

- B. Exercise of effective C2;
- C. Internal and External Military support in terms of Supply of  
Ammunition, Weapon Systems, and other Military Equipment.
- D. Counter the enemy domination in Air, Maritime, and Cyberspace  
Domains in order to mitigate his effects on friendly forces;
- E. Defense and protection own forces and population against air and long  
missile attacks;
- F. Defend to preserve the territories and protect the population.

#### Enemy

#### Strategic SOGs

1. COG: Legitimacy of the actions.
2. Critical Capabilities:
  - A. Superiority in the Economic, Military, and Natural Recourses;
  - B. Capabilities to spread the propaganda among Georgian National  
Minorities;
  - C. International Influence.
3. Critical Vulnerabilities:
  - A. Discontent of own Populace against conducting aggression toward the  
neighboring country;
  - B. Discontent of International community and sanctions from international  
organizations;
  - C. Diplomatic, Informational, Military or Economic involvement of the  
third countries in the conflict against aggressor.

4. Critical requirements:

- A. Legitimation of aggressive actions in the eyes of the populace and international community;
- B. Maintaining internal security;
- C. Quick gain of control over the Government and territory of Georgia.

Operational COGs

1. COG: Country X's Mechanized Formations on the Georgia.

2. Critical Capabilities:

- A. Attacks from Air, Sea, and Cyberspace in support of ground operations;
- B. Large mechanized and armor formations able to achieve and maintain the operational tempo;
- C. Ability to attack from multiple directions on the ground.

3. Critical Vulnerabilities:

- A. Concentrated ground forces vulnerable to the enemy direct and indirect fires in close combat;
- B. Cut of LOCs by enemy and resupply with class III and V materials;
- C. Fighting capabilities in the condition of mountainous area and limited visibility;
- D. Exercise of effective C2.

4. Critical requirements:

- A. Quick defeat of the GAF;
- B. Seizure of the GAF LOCs and other key economic infrastructure;
- C. Maintaining own LOCs intact;

#### D. Domination in the Air, Sea, and Cyberspace.

##### Description of Friendly End State

Strategic End-State: Strategic end-state for Georgia will be defending the sovereignty and territorial integrity from aggressor;

Strategic Objectives: Minimize Country X effects on the Georgian population, territory, infrastructure, and economy. Develop an international coalition as quickly as possible.

Strategy: Defeat the aggressors IO and communicate own messages to the international community in order to gain political, economic, and other support. Request support from the international community and organizations. Use military forces to defeat aggressor's offensive actions and gain time to solve the problem politically. Isolate the breakaway regions to minimize the possible disruptive activities coming from those territories.

Military End-State: The defeat of Country X military intervention and maintain the control over whole territory of Georgia.

Military Objectives: Defend Strategic Centers of Gravity, Prevent enemy forces to establish control over Georgian government, territory, and people.

Effects: The enemy forces culminate and are no longer capable to continue military actions on the Georgian territories.

##### Objectives of the GAF to Achieve the Desired Endstate (Critical Requirements Versus Critical Capabilities)

Problem statement: How do the Government of Georgia and the GAF achieve temporary superiority or parity with Country X Military Forces in order to effectively

counter Country X's offensive operations in all domains (Air, Land, Maritime, and Cyberspace) by modifying the GAF current warfighting capabilities?

Tensions between Current Conditions and Desired End State  
(Constraints and Limitations)

1. “Constraint is a restriction placed on the command by a higher command. A constraint dictates an action or inaction, thus restricting the freedom of action a subordinate commander has for planning”<sup>114</sup>

2. “Limitation is something that limits a quality or achievement”<sup>115</sup>

Doctrine:

Constraints

1. Georgian NMS was last signed in 2005 and it gives provides the guidance for the GAF up to 2010. NMS does not precisely address large-scale military intervention in Georgian territory;<sup>116</sup>

2. The GAF doctrine until recently was based on the former Soviet armed forces doctrine. In recent years, some progress was made in establishing the GAF doctrine, but army still experiences shortage of tactical and operational level doctrinal publications, which would cover range of warfighting capabilities. Most of the available doctrinal publications are translated U.S. Army doctrinal publications, which do not always apply

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<sup>114</sup>Headquarters Department of the Army, FM 1-02 MCRP 5-12a, *Operational Terms and Graphics* (Washington DC: Government Printing Office, September 2004), 1-180.

<sup>115</sup>Dictionary.com, s.v. Limitation, <http://dictionary.reference.com/browse/limitation>. (accessed December 2, 2012).

<sup>116</sup>Ministry of Defense of Georgia, *Strategic Defense Review*.

to the Georgian reality. For example: the GAF does not possess the resources which are available to US Army, the organizations of the same level units may be different and US Army and the GAF may have different objectives to achieve.

3. Frequent adjustments made in the policy, which shapes the efforts for establishment of the effective reserve force, hinders the development of effective reserve system.

#### Limitations

The GAF does not have specially dedicated group or organization to work on development of the GAF doctrine. This role is usually given to the various training organizations as an additional task. There are some efforts made to develop doctrine but they are limited in the resources such as qualified cadre, working space ethnologies and access to the units for the experimentation and research.

#### Organization

##### Constraints

Most of the battalions within the GAF Infantry Brigades are Light Infantry Battalions. These units' does not possess enough warfighting capabilities that would enable them to achieve the superiority or parity with enemy forces during major combat operations.

##### Limitations

Current organization limits the GAF Infantry brigades to achieve the appropriate force ratios with enemy mechanized formations in most of the mission tasks associated with defensive operations they may have to perform in during major combat operations.

## Training

### Constraints

1. Combat units in the GAF greatly depend on the Georgian Joint Staff TMEC subordinate organizations that conduct most of the training for them.
2. NCO school operates within the GAF TIMEC, which provides the courses for NCOs on the lower level.

### Limitations

1. The GAF experiences lack of the qualified instructors/trainers cadre of NCOs who would assume the duties and responsibilities of training of the personnel, which are currently managed by officers. These would relieve the officers' cadre to plan operations and exercise appropriate mission command.
2. The GAF does not have effective training and mobilization system and qualified cadre to train and maintain reserve forces.

## Materials

### Constraints

1. Despite of the some progress made in recent years in the sphere of the development of Military industry, Georgia still does not have sufficient military production, which would satisfy most of the needs of the GAF and make not depended on the import of expendable class V and other materials.
2. The GAF experiences the difficulties with weapons commonality. Currently the GAF uses the weapons systems of different type and origin such as Former Eastern bloc equipment and newly purchased NATO type weapons systems. Recently the GAF also



started using platforms of its own production. These factors in one hand enable the GAF to better operate with NATO countries military, but on the other hand, they create the difficulties force sustainment sustainability of the forces.

#### Limitations

The GAF experiences the shortage of the AT and ADA capabilities, which are necessary to achieve the force ratios on the ground with enemy, mechanized formations and provide successful protection of the personnel, critical assets and civilians from the air attacks.<sup>117</sup>

#### Leadership and Education

##### Constraints

Note: N/A.

##### Limitations

1. The GAF made some moves to establish the officer's career development system, but it is not fully functional yet.
2. The GAF does not have yet established specific leader development programs and courses on the Operational and Strategic level and relies only on the exchange programs with NATO Countries.

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<sup>117</sup>“Chapter Four: Europe,” *The Military Balance*.

### Personnel

#### Constraints

The GAF does not have large standing force to counter large enemy military forces, and is limited to 37 000 personnel total by Georgian law About the Number of Military forces

#### Limitations

The GAF does not have effective reserve mobilization system that would enable to achieve appropriate force ratios with invading enemy forces.

### Facilities

#### Constraints

The GAF did not develop the document that would enable the development of sufficient support facilities for reserve forces.

#### Limitations

1. Majority of the GAF brigades experience the lack of the training space for their subordinate units.
2. The GAF does not possess facilities to simultaneously accommodate, sufficiently train and effectively support required amount of reserve forces.

### Elements within OE that Must Change to Achieve Desired End State

This chapter addresses only one operational variable, the Military, to be developed to ensure the effective defense of the country. This chapter identifies the

changes within the GAF warfighting capabilities necessary for achievement of desired Endstate.

The GAF needs to identify and adopt most critical Warfighting capabilities that best support achievements of its own Military Objectives. Due to the limited resources that Georgia is currently experiencing, it would not be reasonable to try to cover all the gaps inside of the GAF warfighting capabilities. It would be waste of the time and resources to try to adopt the warfighting capabilities that would enable to achieve the parity or superiority over the enemy forces in all domains and warfighting capabilities. Instead, it could be more efficient to focus the efforts on the most critical warfighting capabilities that can ensure the success of the GAF in major combat operations with numerically superior enemy forces. Because Centers of Gravity, both enemy and friendly, are located on the ground it would be critical to develop the warfighting capabilities that give advantages to the GAF in the land domain and minimize the effects of the enemy forces from the other domains.

Definition of warfighting capability: “Warfighting capability is the ability to achieve a desired effect through combinations of means and ways to perform and set of tasks under specified conditions (Military, civil, physical) and standards.”<sup>118</sup>

The U.S. Army TRADOC Pamphlet 525-66, “*Military Operations: Force Operating Capabilities*” describes broad range of warfighting capabilities, which must be

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<sup>118</sup>US Army Command and General Staff College, F100, *Managing Army Change* (Fort Leavenworth, KS: Government Printing Office, 2012), 102RD-2.

developed by Future Modular Forces in order to effectively accomplish their missions.<sup>119</sup>

Improvement or acquiring of some of those warfighting capabilities is also very important for the GAF in order to accomplish their mission and effectively defend the country from large-scale enemy aggression. These warfighting capabilities are most critical for the GAF to be able to accomplish their mission: Lethality, Protection, Survivability, Sustainability, and C2.

### Warfighting Capability 1, Lethality

First and most critical Warfighting Capability required by the GAF is Lethality. “The ultimate lethality of fires is a function of munitions effects, discrete or volume of fires, target location and weapon delivery accuracy and response time, from target detection to assessment of effects.”<sup>120</sup>

Define: Army forces dominate land operations by employing fires and maneuver, during combat operations, to accomplish the task of controlling the ground environment, its populations, and enemy centers of gravity. ... to achieve maximum effectiveness there must be a symbiotic relationship between fires and maneuver, as fires enable maneuver, and maneuver enables fire. This relationship demands synchronization and integration.”<sup>121</sup>

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<sup>119</sup>Training and Doctrine Command, TRADOC Pamphlet 535-66, *Military Operations: Force Operating Capabilities* (Fort Monroe, VA: Government Printing Office, 2008), 12.

<sup>120</sup>*Ibid.*, 79.

<sup>121</sup>*Ibid.*, 78.

Fires are categorized as Line of Site (LOS), Beyond Line of Site (BLOS), and Non Line of Site (NLOS) capabilities encompassing the full spectrum of effects for future forces. LOS, BLOS, and NLOS fires are not exactly defined by range but the method used determines the type of engagement.<sup>122</sup>

LOS Fires are direct, traditional form of fires used by units from mounted, dismounted, air-ground, and unmanned systems to close with an enemy and destroy him.<sup>123</sup> These types of fires have the advantage to point and shoot immediately to the targets that can be directly seen, or sensed by the weapons systems. These types of fires are specially designed to support fire and maneuver, tactical assault, and actions on contact. The masking effects of terrain, however, limit both the range and fields of fire available for LOS engagements.

Key requirements of LOS Fires are weapons systems with high rate of fire capability to be able to quickly engage and destroy multiple stationary and moving targets; increased accuracy and extended ranges of those weapons systems and ability to fire first, with improved first round kill.<sup>124</sup>

BLOS fires are an extension of the traditional direct fire. BLOS are fired over the horizon from systems with the extended ranges capabilities. Direct fire BLOS enables standoff engagements at greater ranges, and also opens up fields of fire previously denied to elements, due to the restrictions of intervening terrain. BLOS fires enable units to

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<sup>122</sup>Ibid., 65.

<sup>123</sup>Ibid., 66.

<sup>124</sup>Ibid., 67.

conduct mutual support and cooperative engagements between platoons, companies, and battalions. BLOS fires enable the units to use the terrain for protection.

Key requirements for BLOS fires are capability of high angle fire, to overcome the restrictive nature of complex and urban terrain.<sup>125</sup>

NLOS indirect fires are higher trajectory fires, that include both maneuver commander's organic capabilities (mortars, cannons, some rockets) as well as supporting systems (cannons, rockets, missiles, attack helicopters, etc.). Maneuver commander synchronizes the maneuver elements with all available fires. To set the maneuver conditions, commanders must be able to employ destructive, suppressive, and protective fires to facilitate maneuver in the close battle. NLOS fires must provide responsive fire support on multiple, disparate, disconnected, point, and area targets, simultaneously. They also must be able to provide mutual support, of dispersed systems to achieve mass effects.

There are three major roles for NLOS fires to support tactical level maneuver formations. They enable and retain freedom of maneuver, by suppression or destruction of enemy forces, or protection of friendly Forces. These roles are:<sup>126</sup>

First, to strike the enemy with killing blows prior to forces being joined in contact.

Second is close supporting fires, to protect own Forces by suppressing or obscuring the enemy forces and air defenses, or conduct counter fires to defeat enemy indirect fire systems.

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<sup>125</sup>Ibid.

<sup>126</sup>Ibid., 79.

Third are special tasks, such as employing illumination during night operations, or emplacing minefields, and the use of other nonlethal effects.

Describe: the GAF units require the fire effects that will enable units to conduct decisive maneuver, effectively engage the enemy with fires and cause the rapid disintegration and destruction of his forces of significantly larger size, without employing attrition techniques.<sup>127</sup> The GAF also needs to possess the capabilities to disrupt, neutralize, defeat or destroy enemy combat capabilities in close operations while minimizing their effects on own forces. The GAF needs to develop fire capabilities, which would give the force on the operational and tactical level advantage over enemy. The GAF needs to be able to conduct destructive, protective, suppressive, and special purpose fire missions with the effectiveness to support maneuver formations to gain positional advantage before enemy. The tactical level maneuver units within the GAF should possess the capabilities to employ destructive fires on enemy formations at extended ranges with great precision. These fires can be employed to defeat the enemy operations or destroy him. The ability to engage and kill the enemy on greater distances will ensure freedom of action and maneuver of friendly units.<sup>128</sup>

To effectively accomplish their objectives during major combat operations, in addition to lethal and destructive fire capabilities the GAF also needs to develop or obtain nonlethal fire capabilities. These nonlethal fire capabilities may be part of protective or suppressive fires in LOS, BLOS, or NLOS categories. Most critical direct and indirect,

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<sup>127</sup>Ibid., 71.

<sup>128</sup>Ibid., 74.

lethal and nonlethal fire capability requirements for LOS/ BLOS and NLOS fires for the GAF are:

1. Ability to provide lethality capabilities for extended range lethality overmatch.
2. Ability to rapidly identify and locate friendly and enemy units, and transfer data in real time to the fire planners and executers.<sup>129</sup>
3. Ability to provide nonlethal fires in order to disrupt, degrade and/or destroy adversary personnel, equipment, and platforms.<sup>130</sup>
4. Facilitate immediate battle damage assessment (BDA) and re-attack as required.<sup>131</sup>
5. Shielding critical assets, population, and centers of gravity from enemy long-range fires.
6. Ability to provide protection of the critical national assets, weapons systems, and platforms from enemy EW effects.<sup>132</sup>
7. Ability to employ EW in support of IO and Electronic deception.<sup>133</sup>
8. Capability to mass fires, without massing the units and weapons systems.<sup>134</sup>
9. Ability to provide mutual support from dispersed locations and rapidly shifts the striking power across the battlefield.<sup>135</sup>

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<sup>129</sup>Ibid., 69-70.

<sup>130</sup>Ibid., 70.

<sup>131</sup>Ibid.

<sup>132</sup>Ibid.

<sup>133</sup>Ibid.

<sup>134</sup>Ibid.



10. Ability to conduct High-angle fires to engage targets, in the conditions of restrictive terrain.
11. Ability to conduct effective preemptive counter fire on short and medium ranges.
12. Suppression of enemy activities to enable ground maneuver formations to gain positional advantage.
13. Isolation of the battlefield once friendly forces are engaged with enemy to prevent enemy reinforcement and avoid overwhelming of the friendly units by enemy.
14. Simultaneous, multi-target set engagement.
15. Close support of ground maneuver force in contact with the enemy.
16. Ability to conduct special tasks such as illumination missions, emplacing mine obstacles, obscuration effects over wide areas, for extended periods, to support ground maneuver and other nonlethal effects.

### Warfighting Capability 2: Protection

Define: Protection is a process, a set of activities and capabilities by which force protects personnel, information, and physical assets against the different threats <sup>136</sup>

Describe In order to accomplish its wartime objectives the GAF needs to have ability to provide:

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<sup>135</sup>Ibid., 96.

<sup>136</sup>Ibid.

1. Protection to the Personnel/Civilian Population;
2. Protection of the Physical Assets;
3. Protection of the Information;
4. Protection of the Units;
5. Protection of the Centers of Gravity;

In order to accomplish the requirements listed above the GAF must develop the capabilities to detect, assess, warn, defend, and recover from enemy kinetic and non-kinetic attacks.

Protect Personnel/ Civilian Population: “Protection of personnel is protection against the effects of enemy capabilities employed against the friendly combatant and noncombatant personnel, its friends and its allies.”<sup>137</sup> The desired outcome of personnel protection is mission assurance and continuity of personnel operations.<sup>138</sup> Key elements of personnel protection for the GAF must be: medical, personal safety, fratricide, noncombatant evacuation, defensive deception, and PSYOP, personnel recovery, consequence management, counterintelligence.

The GAF needs to develop capabilities to mitigate the effects of an enemy attacks on its personnel. The process must be directed toward protection of military personnel and civilian population from the effects enemy air, ground and maritime weapons kinetic and non-kinetic strikes. Protection of the personnel includes the health protection from non-battle injuries, such as disease, and these risks should be mitigated.

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<sup>137</sup>Ibid., 97-98.

<sup>138</sup>Ibid., 98.

Personnel protection measures may be both active and passive and include detection, assessing, warning, treatment and personnel rescue after an attack.<sup>139</sup>

A description of the capabilities required to provide effective personnel protection is as follows:

1. Detect. The ability to detect, monitor, track, and engage enemy threats directed against military and civilian personnel is one of the key capabilities for the GAF. The GAF must obtain clear picture of overall threat to its personnel and population of Georgia through surveillance, detection, and tracking the threats. This will allow the GAF commanders to effectively employ necessary protection measures against specific threats.<sup>140</sup>

2. Assess. Commanders assess enemy capabilities based on the information gathered from different sources and determine the possible threats. After obtaining clear picture about possible threats, they can employ appropriate protection measures to protect personnel and population or develop appropriate countermeasures to enhance personnel survivability from those treats.<sup>141</sup>

3. Warn. Timely warning of personnel of impending attack and what individual and collective personnel protection measures to employ is key in increasing personnel survivability and reducing an enemy ability to damage, destroy, or affect personnel.

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<sup>139</sup>Ibid.

<sup>140</sup>Ibid., 97-98.

<sup>141</sup>Ibid.

Effective warning system needs to be established within the GAF achieve desired level of personal protection.<sup>142</sup>

4. Defend. The timely and successful execution of appropriate, active, and passive personnel protection measures will reduce the effects of an enemy attack and allow continuity of personnel operations.<sup>143</sup>

5. Recover. Timely recovery from enemy effects is essential. Recovery operations must be oriented, include actions, and possess capabilities to effectively treat injured personnel, and return them to operational readiness.<sup>144</sup>

Protection of critical assets is execution of necessary tasks to ensure attacks on those assets are avoided, neutralized, or mitigated.<sup>145</sup> The key elements of protecting physical assets for the GAF are: protection of critical infrastructure (both military and civilian), facilities, major equipment, and logistic lines of communications, ammunition storages, electronic protection, mine/UXO countermeasures, and rear area security.

The desired outcome of critical asset protection is mission assurance, continuity of operations, and continuity of distribution and sustainment.<sup>146</sup> Protection of physical assets is divided on two types: active (monitor, detect, defend, access control systems,

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<sup>142</sup>Ibid.

<sup>143</sup>Ibid.

<sup>144</sup>Ibid.

<sup>145</sup>Ibid., 99-100.

<sup>146</sup>Ibid.

random access measures) and passive (use of fences, alarms, reaction forces, barriers, facility hardening) defense measures.<sup>147</sup> Key capabilities to protect physical assets are:

1. Detect. The GAF requires capabilities to effectively monitor, detect, track, and engage adversary actions against critical facilities. Detection of possible physical attacks, such as air and missile attacks and cyber-attacks against critical facilities requires development of specific capabilities and resourcing.

2. Assess. Effective protection of physical assets from attacks of the large enemy forces with much more capabilities than its own; the GAF requires allocation of large resources to develop appropriate capabilities. The ability to continuously assess, develop, and gain a clear picture of the threat against critical assets, ability to predict his actions against critical assets will help the GAF to effectively use its resources. Employment of the advanced technology, integration of sensors and information networks will help the GAF to develop clear understanding of the threats against critical assets, which will be critical for determining the actions need to be taken to effectively counter those threats and achieve desired protection level for those assets.<sup>148</sup>

3. Warn. Based on the information collected from various sources commanders make decisions and issue warnings to the units what protection measures they should take to mitigate threats to the assets. They can decide to employ either active or passive protection measures. The ability to make timely warning of enemy attacks and determining active and passive protection measures to be implemented is essential for effectively protecting the critical assets. To conduct effective and timely warning requires

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<sup>147</sup>Ibid.

<sup>148</sup>Ibid.

suitable C2 system and assets. The GAF needs to develop capabilities to establish appropriate C2 and obtain the required assets to ensure desired protection for critical assets.<sup>149</sup>

4. Defend. Execution of the protection measures must be conducted with sufficient tempo and quality to give commanders advantage over enemy.<sup>150</sup>

5. Recovery. Recovery measures cover different efforts for the forces beginning from managing the consequences of an attack at an installation, to supporting designated civilian agencies.<sup>151</sup> To conduct effective recovery actions the GAF needs to develop sufficient capabilities, which includes quick restoration of physical assets to operational readiness.

The information protection is any action taken to protect, monitor, analyze, detect, and respond to unauthorized activity within friendly network.<sup>152</sup> One of the critical parts of the information protection operations is the set of the measures taken to ensure that cyber-attacks on the friendly computer networks are avoided, neutralized, or mitigated.<sup>153</sup>

“Cyber-attacks may cause network downing, information compromise, wrong instructions to trigger other events and much more. Cyber-attacks can supplement or replace traditional military attacks, greatly complicating and expanding the vulnerabilities

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<sup>149</sup>Ibid.

<sup>150</sup>Ibid.

<sup>151</sup>Ibid.

<sup>152</sup>Ibid., 101-102.

<sup>153</sup>Ibid.

we must anticipate and counter.”<sup>154</sup> Protection activities must provide the ability for the friendly computer network to operate within the OE, and at the same time be effective to counter enemy cyber-attacks and mitigate their effects.<sup>155</sup> The effectiveness of defense from the attacks on friendly networks is achieved by system’s ability to precisely detect and identify threats, disseminate precise warnings, and take actions to isolate, repel, or mitigate the effects of the attacks. The protection of the information activities includes detect, assess, warn, defend and recover actions.

1. Detect actions include monitoring and detecting potential EAs against system vulnerabilities.<sup>156</sup>

2. Assess. “Assessing and understanding the nature of an adversary cyber-attack requires the ability to quickly and accurately determine the characteristics of the attack including criticality and vulnerability of the systems against which an attack is directed, source of the attack, and purpose of the attack.”<sup>157</sup>

3. Warn. The GAF must develop capabilities to counter adversary cyber-attacks such as taking timely and appropriate defensive actions, warning the users quickly about threat, determining the appropriate actions to effectively mitigate the effects of an attack, and selecting additional protection measures to preclude a future occurrence.<sup>158</sup>

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<sup>154</sup>Ibid.

<sup>155</sup>Ibid.

<sup>156</sup>Ibid.

<sup>157</sup>Ibid.

<sup>158</sup>Ibid.

4. Defend. Protecting information consists of both active and passive defensive measures and employs IA technology systems.<sup>159</sup> Effective information protection and countering enemy cyber-attacks relies on the technological capabilities. To effectively protect information from enemy attacks the GAF needs to develop capabilities, which may include acquisition of most advanced IA technologies, trained IA Personal, and establishment of secure and effective system of operation of friendly networks.

5. Recover. “The recovery capabilities will include effective access denial, the ability to recover from EM attacks, ability to prevent/mitigate system intrusions, and the ability to restore corrupted data.”<sup>160</sup> These capabilities are key to continue desired computer operations.

Protect Unit/ Centers of Gravity: “Unit protection is the integration of active and passive capabilities and processes, provided to operational and/or tactical units across the ROMO to protect unit personnel, assets, and information against traditional and asymmetrical ground, air, CBRNE, and electronic hostile threats, in order to conserve unit fighting potential.”<sup>161</sup>

Most critical and challenging for the GAF will be protection of the critical support facilities which are usually located at home locations; supply units and convoys in rear support areas and along the lines of Communication; points of the reserve forces mobilization, and COGs from the enemy long range artillery and rocket fires and aviation attacks; the GAF needs to develop capabilities to effectively overcome enemy advantages

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<sup>159</sup>Ibid.

<sup>160</sup>Ibid.

<sup>161</sup>Ibid., 103.



in the long range striking capabilities and protect the units from the effects of the enemy attacks. Additionally units on the tactical level will be required to dedicate forces to defend critical support facilities and logistical convoys. The GAF will need to find the solutions to create appropriate protection system that will mitigate enemy effects on the GAF units and give them freedom of action to execute their missions.

Required capabilities include:<sup>162</sup>

1. Detect the threat at standoff distances.
2. Provide overlapping sensor detection capability.
3. Develop medium and short-range operational and tactical, air and missile defense capabilities, which effectively cover whole territory of Georgia.
4. Provide real time SA allowing commanders, staff, and Soldiers to visualize the battlefield three dimensionally.
5. Disseminate warning (physically, audibly, virtually, and visually) to all echelons, formations and the individual Soldier
6. Provide the capability to execute lethal and nonlethal, warning to the adversary, who will deter, interrupt or cease further attacks on the Military Units.

### Warfighting Capability 3: Sustainability

Define: “Sustainability is the ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of

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<sup>162</sup>Ibid.

providing for and maintaining those levels of ready forces, infrastructure assets, materiel, and consumables necessary to support military effort.”<sup>163</sup>

Sustainability is the probably the most critical and challenging warfighting capability the GAF needs to develop and maintain. To conduct the major combat operations against the adversary that is superior in almost all military and economic capabilities requires from the GAF to have ability to sustain the operations for extended time. This is especially challenging in the conditions where enemy has superiority in air and sea and has great ability to cut or disrupt internal and external lines of communication. In order to effectively sustain the operations against enemy and satisfy the demands of the subordinate units on resources the GAF requires developing following capabilities:

1. Ability to generate resources (fuel, ammunition, repair parts, other consumables, and services) necessary to sustain operations. This may include the development of the national military industry, support from allied countries, and development of the secure infrastructure for storage of materials.

2. The ability to provide effective logistics C2 emphasizing speed, precision, accuracy, visibility, and centralized management.<sup>164</sup>

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<sup>163</sup>Joint Chiefs of Staff, *CJCS Guide to Chairman's Readiness System* (Washington, DC: Government Printing Office, 15 November 2010), [http://www.dtic.mil/cjcs\\_directives/cdata/unlimit/g3401.pdf](http://www.dtic.mil/cjcs_directives/cdata/unlimit/g3401.pdf) (accessed November 24, 2012).

<sup>164</sup>*Ibid.*

3. Develop effective system of the supply distribution and management to securely and uninterruptedly deliver necessary support at the right time, in the right place and in the right quantities in the conditions of difficult environment.

4. Split-based, modular units.

5. Sustainment integrated with combat operations by the combat commander.<sup>165</sup>

6. Develop effective medical support system.

7. Lighter weight, shelf-stable, appealing, and nutritious individual and group operational rations, which require little or no preparation.<sup>166</sup>

8. Demand for fuel, ammunition, repair parts, and other supplies, must be optimized within the GAF same time allowing the tactical units to maintain the capabilities to achieve success over enemy. Those capabilities may include conduct of maneuver, maintaining the operational tempo, and seize the initiative from enemy.

The optimization of the resources may be achieved by leveraging the characteristics of the restricted terrain, shortening the supply distances, proper location of the storages, acquiring relatively inexpensive but effective or highly precise AT weapon systems to reduce the expenses.

#### Warfighting Capability 4: Command and Control (C2)

Define: “C2 is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of a mission.”<sup>167</sup>

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<sup>165</sup>Ibid.

<sup>166</sup>Ibid.

<sup>167</sup>Training and Doctrine Command, 25.

Command is the authority that a commander exercises over subordinates by virtue of rank or assignment. Command includes leadership, authority, and accountability as well as responsibility for unit readiness, health, welfare, morale, and discipline of assigned personnel. More importantly, command carries the responsibility for effectively using available resources and planning the employment of assigned forces to accomplish assigned missions.<sup>168</sup>

Control is the regulation of forces and warfighting functions to accomplish the mission in accordance with the commander's intent. While command is a personal function, control is fundamental to directing operations and involves the entire force. Commanders exercise control over all forces in their AO.<sup>169</sup>

Commander has the central role in the execution of C2. C2 allows commanders to assess the situation, make decisions, and direct the action. Execution of effective C2 requires from commanders to:<sup>170</sup>

1. Achieve and maintain situational understanding.
2. Execute the decision-making process.
3. Control forces and warfighting functions.
4. Adapt to change.

Describe: In the complex environment imposed by restricted terrain and overwhelming enemy with large capabilities, the GAF units may find themselves cut off or isolated from higher and each other. Therefore, it is extremely critical for the GAF that

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<sup>168</sup>Ibid.

<sup>169</sup>Ibid.

<sup>170</sup>Ibid.

units could continue conduct operations autonomously and same time direct their actions to achieve common objectives. In such a situation commanders on the tactical level must be able to make decisions that compliment overall operational picture and support the achievement of ultimate objectives. The Mission Command is the method that can enable the commanders of the GAF to successfully conduct the operations in complex environment. “Mission command is characterized by decentralized execution in which commanders conveys purpose without providing detailed direction on how to perform the task or mission. Mission command empowers subordinate initiative by emphasizing the higher commander’s intent and requires an environment of trust and mutual understanding.”<sup>171</sup>

To exercise effective C2 during major combat operations and achieve success in countering large enemy forces the GAF requires developing following capabilities:

1. Army leaders that can perform effectively in major combat operations in a complex and uncertain operational environment.<sup>172</sup>
2. Subordinate leaders that can effectively operate across all operational phases.<sup>173</sup>
3. Commanders, which are capable of operating effectively with degraded BCSs.<sup>174</sup>
4. Communicate action and intent through mission-type orders to subordinate echelons and commanders.<sup>175</sup>

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<sup>171</sup>Ibid.

<sup>172</sup>Ibid., 26.

<sup>173</sup>Ibid.

<sup>174</sup>Ibid

5. Provide improved strategic responsiveness and standardization.<sup>176</sup>
6. Challenging live, virtual, and constructive exercises to train leaders through the practice and application of leadership.<sup>177</sup>
7. Mobile and fixed computer assisted modeling and simulation facilities to provide commanders and staffs the ability to exercise C2 for the different combat operations.<sup>178</sup>
8. Training and leadership development programs to enable rapid decision-making and effective C2.<sup>179</sup>
9. Provide special education opportunities for officers selected for command to develop higher-level cognition skills as part of their pre-command preparation.<sup>180</sup>
10. Training programs and exercises that allow commanders to practice C2. Commanders are challenged to take risks, evaluated on how well they follow the higher commander's intent so as to understand the successful application of mission command.<sup>181</sup>

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<sup>175</sup>Ibid.

<sup>176</sup>Ibid.

<sup>177</sup>Ibid.

<sup>178</sup>Ibid.

<sup>179</sup>Ibid.

<sup>180</sup>Ibid.

<sup>181</sup>Ibid.

11. Improved officer and NCO career tracking systems to provide appropriate progressive opportunities for developing command and staff experience.<sup>182</sup>

12. Collection standardized modular command post components (shelters, trailers, tents, large screen displays, electric power, local area networks, etc.) that are lightweight, easy to emplace and displace, and support mission requirements.<sup>183</sup>

### Warfighting Capability 5: Survivability

Define: Survivability is a: “Concept which includes all aspects of protecting personnel, weapons, and supplies while simultaneously deceiving the enemy.

Survivability tactics include building a good defense; employing frequent movement; using concealment, deception, and camouflage; and constructing fighting and protective positions for both individuals and equipment.”<sup>184</sup>

Describe: To effectively fight the outnumbered and technologically superior enemy forces that can effectively detect, engage and inflict heavy casualties to friendly forces from standoff distances the GAF needs to develop the capabilities that will enable him to achieve the parity with enemy in the close battler. To achieve success, the GAF needs to reduce enemy ability to use the numerical and technological advantages against them and same time be able to effectively engage significantly larger enemy forces by using advantages of the training, terrain, defensive mood of the operations, which

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<sup>182</sup>Ibid., 27.

<sup>183</sup>Ibid.

<sup>184</sup>Department of the Army, Field Manual (FM) 1-02/MCRP 5-12a, *Operational Terms and Graphics* (Washington DC: Government Printing Office, 2004), 1-180.

requires less resources, technological superiority of the direct fire weapons systems and effective survivability capabilities.

In some areas, restrictive Georgian terrain offers good survivability to the forces. Defending forces may use the terrain for their advantage. This advantage can be leveraged by developing some additional survivability capabilities for the GAF. By increasing the survivability capabilities, the GAF will be able to reduce the effects of enemy long-range highly technical weapons systems on its units. It also allows the GAF units to effectively counter the larger enemy forces with fewer forces, restrict enemy freedom of maneuver, and prevent him using its numerical and technological advantage to effectively mass the overwhelming forces against friendly units. This may help the GAF maneuver forces to gain the initiative and play decisive role in achievement of the desired military Endstate by the GAF. Thorough planning and deliberate preparation works in the anticipated AOs will increase the chances of success for the GAF.

Survivability doctrine addresses five major points for the battlefield:

1. Maneuver units have primary responsibility to develop, position, and begin building their own positions.
2. The engineer's ultimate role in survivability is set by the maneuver commander controlling engineer resources.
3. Based on those resources, engineer support will supplement units as determined by the supported commander's priorities.
4. Engineer support will concentrate on missions requiring unique engineer skills or equipment.
5. Survivability measures begin with using all available concealment and natural cover, followed by simple digging and constructing fighting and protective positions. As time and the tactical situation permit, these positions are improved.<sup>185</sup>

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<sup>185</sup>Department of the Army, Field Manual (FM) 5-103, *Survivability* (Washington DC: Government Printing Office, June 1985), [http://armypubs.army.mil/doctrine/DR\\_pubs/dr\\_a/pdf/fm5\\_103.pdf](http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/fm5_103.pdf) (accessed November 20, 2012), 1-1.



Following activities will help the GAF to gain effective survivability capabilities and effectively counter the threats during the major combat operations:

1. Increase the number of engineer units to be able to effectively support the GAF survivability requirements.

2. Develop survivability capabilities to increase the GAF engineer's ability to support maneuver units. It may include purchasing new combat engineer equipment and construction materials and training of the personnel.

3. Conducts preliminary survivability preparations to gain advantage against enemy before an enemy attack. It may include construction and camouflage of deliberate positions for weapons systems (Primary, Alternate, and Supplementary), C2 nodes and supply storages, selection and improvement of LOC between units. This also may help to deter the aggression.

A good example for this is the South Korean defense concept against North Korean military intervention. Although small-scale attacks in to the South Korean territory from North Korea are frequent, South Korea for many years effectively uses well-prepared defensive regions with fortified positions and obstacle belts to deter North Korean large-scale military intervention.<sup>186</sup>

4. Increase maneuver units survivability capabilities by updating their organizations and MTOS and conduct appropriate training of personal.

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<sup>186</sup>Abraham M. Denmar, "Proactive Deterrence: The Challenge of Escalation Control on the Korean Peninsula," Korean Economic Institute, December 2011, [http://www.keia.org/sites/default/files/publications/proactive\\_deterrence\\_paper.pdf](http://www.keia.org/sites/default/files/publications/proactive_deterrence_paper.pdf) (accessed December 5, 2012).

5. Construct company/ battalion size defensive positions for the delaying units in case of retrograde operations.<sup>187</sup>

6. Upgrade the survivability of the critical infrastructure in the rear area to increase the protection against the deep attacks of enemy aviation, long-range indirect fires, or airborne forces.

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<sup>187</sup>Department of the Army, FM 5-103, 1-4.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

In chapter 4, the operational design process is used to describe the operational environment in Georgia. Additionally, it describes the objectives and desired End-states for the GAF, should a foreign military intervention in to the Georgian territory occur. It further identifies required warfighting capabilities for the GAF, which are required to defend against large military forces. After identification of the required warfighting capabilities, the DOTMLPF process is applied to those capabilities. Which describes the method of employing required warfighting capabilities?

This leads strait to the primary research question: “How can Georgia create military forces capable to effectively defend the country’s sovereignty from the aggression of significantly larger military power?” which will be concluded in this chapter. Warfighting capabilities identified during the analysis as most critical for the GAF to achieve the desired military Endstate were: Lethality, Protection, Survivability, Sustainability, and C2. To develop those capabilities the GAF needs to implement some changes in to their existing capabilities. Areas for changes are:

#### Doctrine

The GAF needs updated NMS, which would better address the challenges and threats for the GAF and set the future goals and objectives for it. This will help the GAF to set the priorities for the future development.

U.S. Army tactical level doctrinal publications may be used by the GAF as a basis for development of its own doctrine on tactical and operational level. This doctrine should be oriented to the accomplishment of the goals and objectives set by strategic level doctrinal documents such as NMS and NSC. The GAF may use tactical and operational level U.S. Army doctrinal publications augmented with own experiences and lessons learned from its past combat operations to develop the GAF doctrine best suitable for Georgian reality. The priority during development of the doctrine should be given to the standardization of the most critical warfighting capabilities identified in chapter 4: C2, Lethality, Protection, Sustainability, and survivability. In addition to the destructive military assets, implementation of the other, nonlethal assets need to be considered during doctrine development.

### Organization

Organization should ensure decentralized action of the GAF units in the process of accomplishment of their missions. It also must allow the GAF units to achieve maximum effectiveness in the identified warfighting capabilities.

**Lethality:** New organization must enable the GAF units bringing sufficient firepower to the battlefield to effectively engage enemy armored and mechanized formations and achieve desired effect on them. This should include the LOS, BLOS and NLOS fire capabilities to maximize the effects of the GAF units on enemy and enable them to seize and maintain initiative. The dismounted units down to the platoon level must possess LOS and BLOS capabilities to kill armored vehicles.<sup>188</sup>

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<sup>188</sup>Training and Doctrine Command, TRADOC Pamphlet 535-66, 67.

Protection: The military organization must ensure the capabilities of conducting all types of protection measures. Protection measures of personnel, physical assets, information, and units must be implemented in all echelons of the GAF. To increase the efficiency and optimize the resources some of the protection missions (Protection of the personnel, assets, information) in the rear areas can be delegated to the civilian agencies or paramilitary forces (Reserve or ministry of internal affair forces).

Sustainability: In order to ensure decentralized execution the GAF organization must allow conducting effective sustainability on the lowest echelons of the GAF. The GAF must develop capabilities of effective maintenance and evacuation of the combat equipment on the battalion level and effective resupply system down to the company level.

C2: Organization must allow the GAF units to effectively execute missions with the decentralize C2. This will enable the GAF to maximize effects on the enemy and same time reduces the enemy effects on them. Mission command is best suited to allow this type of the command and control.

Survivability: Avoid large concentration of the friendly forces to accomplish the missions. This will deprive enemy ability to use its advantages, such as superiority in the air assets, long-range indirect fire systems, and number of the armored and mechanized forces, against the GAF units.

### Training

Shortages and limitations imposed by high cost of advanced technological weapons systems may be overcome by highly trained and professional personnel, who know how to effectively use the highly lethal weapons systems against the enemy.

Professional, aggressive, adaptive, leaders and highly trained soldiers with combat systems enabling to produce effective, precise, lethal fires are critical for the GAF units in obtaining superiority in close combat, LOS and BLOS environment.<sup>189</sup>

Effective training system will enable the GAF to increase the expertise of its personal and leadership. Increasing performance quality of the GAF from individual to unit level can partially compensate the shortages of the materials and advanced weapons systems.

Lethality: Virtual simulation systems, recently introduced in to the GAF are partially able to increase the training level of the personal and same time helps to reduce the expenses. However, those simulation systems do not fully cover the weapons systems that the GAF is using. Purchase or development of virtual simulators, of those AT weapons systems available in the GAF, is critical step in effective training of the personal.

Protection: Training exercises in the GAF must cover the interagency actions during the crisis in order to increase the effective coordination between various agencies in Georgia. This will help to define the roles of different organizations and refinement of the standard action procedures during the crisis.

Sustainability: The training of the combat service support units must be integrated in to the training exercises of the combat units to increase the effectiveness of the support, and identify the shortfalls in the support system. The selection and training of the maintenance personal for the GAF battalion maintenance units is critical for the effective sustainment.

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<sup>189</sup>Ibid.

C2: the GAF must implement special leadership development programs to increase the performance level of the commanders on every level. The training programs must improve tactical unit commander's ability to communicate actions and intents to the subordinate commanders' through the mission type orders.<sup>190</sup>

Survivability: the GAF must develop appropriate knowledge in the maneuver units to effectively increase the survivability of own personal and equipment during major combat operations. This can be accomplished by implementation of different programs.

Each soldier in the GAF needs to be able to improve the survivability for him and his weapon systems. Soldiers also need to be aware of the importance of the survivability for the accomplishment of the mission. Development of these skills among the GAF personnel must begin from very early phases of their service. Basic training courses and other individual and collective training programs should cover and facilitate development of these skills among the GAF personnel.

In addition, the survivability training can be permanently incorporated in to the unit's METL and reinforced during the training exercises.

#### Materiel

Lethality: In order to achieve desired force ratios or superiority over the enemy the GAF must obtain weapons systems that provide superior lethality capabilities over enemy same time minimizing their effects on own forces. This can be done by purchasing high accuracy direct and indirect weapons systems, which could be able to operate and

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<sup>190</sup>Ibid., 26.

bring the desired effect on the enemy from dispersed positions. This would also increase the survivability for those weapons systems particularly in urban and complex terrain environments. Desired characteristics for the weapons systems should include:

1. Real time target detection and identification,
2. Ability to conduct a first strike/kill beyond the range of threat direct fire systems.
3. Capabilities to deliver multiple effects, such as nonlethal, EW, fire support, counter IO,
4. Automated fire control systems with manual backups.
5. Target acquisition sensors with sufficient ranges and target location accuracy,
6. Combat maneuvers systems with onboard weapons, effective in both LOS and BLOS engagements.<sup>191</sup>

Protection: These weapons systems may be based on the armored vehicles that increase the protection of the personnel from small arms fires, explosive blasts, and fragments. There are range of different vehicles available, including the Georgian production tracked and wheeled armored vehicles that can provide the platforms for those weapons systems.

Sustainability: Assets that allow the units to conduct combat equipment evacuation and maintenance, in decentralized manner, in the field conditions is another critical capability requirement for the GAF.

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<sup>191</sup>Ibid.



Selecting the Georgian produced platforms for the AT and ADA weapons systems purchased from other manufacturer countries will increase the commonality and optimize the maintenance requirements for the GAF combat equipment.

The selection of the vehicle platforms with reduced fuel consumption will optimize the sustainability and reduce expenses, which will become critical factor for prolonged combat operations.

C2: The modern communication equipment purchased by the GAF in past is perfectly fits the requirements C2. The capabilities that increase the coverage reliability and security of the communication networks must be further developed.

Survivability: Develop sufficient survivability capabilities (material and assets); on the battalion level and company, level is important for the GAF. This will enable the battalions to support survivability needs of subordinated units and give them greater independence during the combat actions

#### Leadership and Education

Lethality: The GAF commanders on every level must be able to find the ways for most effective employment of their weapons systems to be able to seize and maintain the initiative over enemy. They must be able to find best use of their weapons systems in the given terrain against the enemy formations.

Beside destructive effects on the enemy forces, leaders in Georgian army must be able to effectively use nonlethal capabilities such as information operations to target enemy centers of gravities.

To enable the commanders in the GAF to develop these skills, the leader development and education courses must address the development of those areas.

Protection: N/A

Sustainability: Concurrently with development of the commanders and leaders of the combat and combat units, the development of the commanders of the combat service support units needs to be emphasized. The commanders of the supporting units must be able to accomplish their missions to support the supported units with great autonomy.

C2: As disperse of the combat units during the combat operations was identified, as the preferred method for the GAF to counter the larger size enemy formations, decentralized command, and control will become the essential for those types of the operations.

The mission command will enable the commanders to execute their missions with the relative autonomy. Two major components are critical for effective exercise of the mission command, the competence, and mutual trust of the commanders (both subordinate and higher); The GAF must start integrating the programs to develop the effective Mission Command relationship skills among their commanders and the leaders. In addition, to execute the operations in autonomous environment and achieve the desired effects over enemy requires the GAF commanders on every level to be highly trained, multifunctional, aggressive, and adaptive to the changing environment. This may be achieved by implementation of the challenging field exercises with integrated live and constructive simulation systems to add reality to training.

Survivability: Develop training programs for the GAF leaders to increase their ability to more effectively use protective nature of the terrain with available survivability assets to increase the survivability of the own units.

## Personnel

Lethality: Aggressive, professional, skilled, and adaptive leaders and soldiers, equipped with the adequate lethal and nonlethal capabilities, are fundamental in obtaining and maintaining the overmatch with enemy.<sup>192</sup>

Protection: To increase the efficiency and optimize the human resources of the GAF some of the protection missions the non-permanent the GAF human resources may be used. For example, personnel of the reserve with the special skills should be identified and employed for the protection missions such as the protection of the personnel (Health), critical assets (Guarding), information (IT operations) etc.

Sustainability: For increase of the sustainability of the GAF, personnel with special skills must be selected and retrained to accomplish the supporting missions in autonomous mood and in the conditions of degraded sustainment system.

C2: The commanders have central role in the C2 system. Success of the operations greatly depends on the commander's ability to exercise effective C2. Experience and competence, of the commanders are decisive factors for success. Effective leadership not only depends on education but amount experience of those leaders. Therefore, the careful selection and development of the leaders with appropriate skills and experience is critical task for the GAF.

Survivability: The commanders and soldiers of the GAF must be prepared for effective use the advantages of terrain, conduct effective selection, planning, and arrangement of the engagement areas, and preparing survivability positions for weapons and personal.

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<sup>192</sup>Ibid., 66.

## Facilities

**Lethality:** The training facilities to increase the effectiveness of the GAF personal to operate the AT and ADA weapons systems must be developed in the GAF units on the brigade level.

**Protection:** The protection of the home dislocation of the GAF units (Brigades) is the most important part of the unit's protection mission. The focus of the protection must be the protection of the unit's dislocations and C2 nodes from the enemy Air Attacks. The effective medium range ADA systems may solve this problem, by effectively covering most of Georgia territory.

**Sustainability:** The storages of the weapons systems need to be created for every unit according to the contingency plans. These facilities must be able to support the GAF sustainment requirements for extended periods, during the major combat operations. The system to appropriately maintain, protect, and secure these facilities must be developed.

**C2:** Operational and tactical unit level command posts locations can be selected, prepared in advance and sufficiently secured, and protected from enemy effects in order to ensure effective execution of the command and control.

**Survivability:** Survivability of the C2 nodes, sustainment Facilities and other critical military infrastructure and assets must be one of the biggest priorities for the GAF. The survivability of these critical facilities must be achieved by appropriate planning and execution of survivability activities. The C2 nodes and sustainability facilities must be appropriately reinforced, camouflaged, and protected from enemy in advance, to ensure the carry-on of the operations.

### Summary and Recommendations

This research is attempt to apply the analysis to the GAF ability to effectively defend the country's sovereignty from large scale military intervention, and identify most critical warfighting capabilities that would help the GAF to achieve desired Endstate. These military capabilities were selected, with the vision of achieving the sufficient force ratio, to defend against a larger enemy force in a specific physical environment. The GAF may exploit the restricted characteristics of the Georgian terrain for own advantage.

Additionally other warfighting capabilities may be examined in future studies to identify the necessity or rationality of their development for the GAF.

This research is limited by examining only one, Military Source of National Power. It identifies those military warfighting capabilities, which are most critical to increase the possibility of achievement of desired Strategic Endstate by Georgia. The achievement of the desired strategic Endstate for the GAF would not be possible only by military power. The other sources of national power such as diplomatic, informational, and economic should be also considered in defense of sovereignty of the country. Thus, the analysis of those sources of national power may be important topic for future studies. In addition, the exploration of required capabilities of those aspects of National Power and best methods of implementation of those capabilities in combination with military capabilities, to achieve the desired results would be interesting topic for future studies.

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